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REVISION AND PHYLOGENY OF THE TRIBES CURIINI LECONTE AND PLECTROMERINI NEARNS & BRANHAM, NEW TRIBE (COLEOPTERA: CERAMBYCIDAE: CERAMBYCINAE)

By

EUGENIO H. NEARNS
AND
MARC A. BRANHAM

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Revision and Phylogeny of the Tribes Curiini LeConte and Plectromerini Nearns & Branham, New Tribe (Coleoptera: Cerambycidae: Cerambycinae)

BY

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ABSTRACT—A revision and phylogenetic analysis of the tribe Curiini LeConte is presented. A phylogenetic analysis of Curiini employing 31 ingroup taxa, five outgroup taxa, and 39 morphological characters was conducted. Results of this analysis suggest that the tribe is polyphyletic with respect to the outgroup taxa chosen. The genus *Curius* Newman is monophyletic and strongly supported by five unambiguous synapomorphies. The genus *Plectromerus* Haldeman is monophyletic and results support inclusion of the monotypic genus *Curiosa* Micheli as a member of the genus *Plectromerus*. The clade *Plectromerus* + *Curiosa* is strongly supported by four unambiguous synapomorphies. Based on these results, the genus *Curiosa* is synonymized and the new combination *Plectromerus dominicanus* (Micheli) is proposed. To address the polyphyly of Curiini, the new tribe Plectromerini Nearns & Branham is proposed and the genus *Plectromerus* is designated as the type genus. The previous synonymy of the genus *Pentomacrus* White with *Plectromerus* is supported, as well as a previous transfer of *Plectromerus punctatus* (Fisher) to *Curius*. Eight new species of *Plectromerus* are described and illustrated: *Plectromerus dezayasi* from Nicaragua, *Plectromerus giesberti* from Guatemala, *Plectromerus hovorei* from Costa Rica and Honduras, *Plectromerus josephi* and *Plectromerus turnbowi* from the Dominican Republic, *Plectromerus michelii* from the Cayman Islands, *Plectromerus morrisi* from Panamá, and *Plectromerus thomasi* from Haiti. In addition, seven species are redescribed and illustrated: *Curius panamensis* Bates; *Plectromerus distinctus* (Cameron); *Plectromerus exis* Zayas; *Plectromerus fasciatus* (Gahan); *Plectromerus femoratus* (Fabricius); *Plectromerus pinicola* Zayas; and *Plectromerus serratus* (Cameron). The following new synonymies are proposed: *Plectromerus costatus* Cazier & Lacey = *Plectromerus dentipes* (Olivier); and *Plectromerus crenulatus* Cazier = *Plectromerus distinctus* (Cameron). Diagnoses of all known species of *Curius* and *Plectromerus* are presented with notes on distribution, diversity, and relationships. New country records are reported for *P. exis* (Jamaica); *P. fasciatus* (Montserrat); *Plectromerus pumilus* Cazier & Lacey (Cuba); and *Plectromerus wappesi* Giesbert (Honduras, Jamaica). Keys to the four species of *Curius* and 27 species of *Plectromerus* are presented. A biogeographic analysis based on the results of our phylogenetic analysis suggests that more basal species of *Curius* and *Plectromerus* are of Antillean distribution while more derived taxa are of Antillean, Central American, and South American distribution.

INTRODUCTION

The longhorned beetle tribe Curiini LeConte (Coleoptera: Cerambycidae: Cerambycinae), as historically recognized, is a medium-sized group of Nearctic and Neotropical cerambycid beetles. As currently defined (Monné 2005), Curiini consists of three genera (*Curiosa* Micheli, *Curius* Newman, and *Plectromerus* Haldeman) containing 23 extant and two extinct species. A fourth genus, *Pentomacrus* White was synonymized with *Plectromerus* by Giesbert (1985). A previous phylogenetic analysis of Curiini has not been conducted and the monophyly of the tribe is untested.

Curiini are of predominantly Antillean distribution and show a high level of endemism, with a majority of species occurring in Hispaniola and Cuba. They also occur in USA (eastern, southeastern, and Great Plains), Caribbean, and range from southeastern Mexico to Venezuela (Hovore 2002; Monné & Hovore 2005; Nearns & Ray 2006). The tribe has traditionally been defined by the presence of following morphological characters: coarsely-faceted eyes; flat, transverse head; and strongly clavate femora armed beneath with a broad tooth.

The type genus of Curiini is *Curius* Newman which currently contains four species: the type species for the genus *C. dentatus* Newman known only from USA (eastern, southeastern, and Great Plains); *C. panamensis* Bates known only from Panamá (Central America); *C. punctatus* (Fisher) known only from Cuba (Greater Antilles); and *C. chemsaki* Nearns & Ray known only from Venezuela (South America) (Fig. 65).

The monotypic genus *Curiosa* Micheli is known only from Dominican Republic (Greater Antilles).

The genus *Plectromerus* currently contains 19 extant species (*P. acunai* (Fisher); *Plectromerus bidentatus* Fisher; *P. dentipes* (Olivier); *P. costatus* Cazier & Lacey; *P. distinctus* (Cameron); *P. crenulatus* Cazier; *P. exis* Zayas; *P. fasciatus* (Gahan); *P. femoratus* (Fabricius); *P. femoratus* White; *P. lingafelteri* Micheli & Nearns; *P. navassae* Nearns & Steiner; *P. ornatus* Fisher; *P. pinicola* Zayas; *P. pumilus* Cazier & Lacey; *P. ramosi* Micheli & Nearns; *P. serratus* (Cameron); *P. unidentatus* Fisher; *P. wappesi* Giesbert and two extinct species (*P. grimaldii* Nearns & Branham † and *P. tertiarius* Vitali †). *Plectromerus* are recorded from USA (eastern, southeastern, and Great Plains), southeastern Mexico, Central America (Costa Rica, Guatemala, Honduras, Nicaragua, Panamá), Bahamas, Greater Antilles (Cayman Islands, Cuba, Hispaniola, Jamaica, Navassa Island, Puerto Rico), and Lesser Antilles (Grenada, Montserrat, St. Vincent, British Virgin Islands, U.S. Virgin Islands). Eight new species of *Plectromerus* are described herein. In addition, a new species of *Plectromerus* from Barbados (Lesser Antilles), *P. louisantoini*, was described by Dalens & Touroult (2007) as this manuscript was going to press.

Literature Review

In his classic work on the Cerambycidae of North America, Linsley (1963) redefined the tribe Curiini based on the two species which occur in USA (*C. dentatus* and *P. dentipes*) and redescribed the genus *Curius* based on *C. dentatus*. Craighead (1923) described and illustrated the larva of *C. dentatus*. Fragoso (1978) illustrated the male and female genitalia of *C. dentatus* in his analysis of tribal classification within the subfamily Cerambycinae. Nearns *et al.* (2005) transferred *P. punctatus* to *Curius* based on an examination of the holotype.

Plectromerus was first treated by LeConte (1873a, b), and then by LeConte & Horn (1883) and Leng (1885). Linsley (1963) designated *Obrium dentatum* J. E. LeConte as the type species (= *P. dentipes* (Olivier)) and redescribed *Plectromerus* based on *P. dentipes*. There has been some confusion about the generic attributes of *Plectromerus* and *Pentomacrus* (Linsley 1963; Micheli 1983; Micheli & Nearns 2005), but no previous revisionary work has been done. Cameron (1910) described two species in *Pentomacrus* and provided a key for species in this genus only. Cazier & Lacey (1952) commented on the taxonomic problem clouding these two genera and included both in a key to 13 species. Later, Giesbert (1985) stated that the differences were not sufficient to justify two genera and thus synonymized *Pentomacrus* with *Plectromerus*. Although a few recent works mention both genera (Piña *et al.* 2004; Poinar 1992; Vitali 2004; Vitali & Rezbanyai-Reser 2003), revalidation of *Pentomacrus* has not been proposed and we suspect these authors were unaware of Giesbert's synonymy. Several workers provided keys to Curiini (Arnett 1973; Turnbow & Thomas 2002; Cameron 1910; Cazier & Lacey 1952; Micheli 1983; Vitali 2004; Vitali & Rezbanyai-Reser 2003).

The monotypic genus *Curiosa* was created with the description of *Curiosa dominicana* Micheli from a single female specimen collected in the Dominican Republic. Micheli (1983) stated that this species fit Linsley's (1963) tribal definition with a few exceptions, the most significant being the lack of coarsely-faceted eyes (*Curiosa* has finely-faceted eyes) and the number of antennomeres (*Curiosa* has 10-segmented antennae, all other described curiines have 11-segmented antennae). Only two additional specimens are known to have been collected since Micheli's work, one female deposited at the National Museum of Natural History (USNM) and the other (gender undetermined) at the Museum of Comparative Zoology (MCZWeb, 2007).

The genera of Curiini were first grouped together by LeConte (1873a) who included the genera *Curius* and *Plectromerus* in "Group IV, the Curii" and placed the tribe before the Obriini Mulsant. LeConte (1873a) also provided a description of the unifying characters for the tribe. In his Coleopterorum Catalogus, Aurivillius (1912) listed Curiini and included the genera *Curius*, *Plectromerus*, and *Pentomacrus*. Leng (1920) and Blackwelder (1944) placed Curiini before Graciliini Mulsant. Arnett (1973) placed Curiini between Ibidionini Thomson and Hyboderini Linsley. Linsley (1963) and Downie & Arnett (1996) placed Curiini between Ibidionini and Obriini. Recent literature placed Curiini between Callidiopini Lacordaire and Graciliini (Turnbow & Thomas 2002; Monné & Hovore 2003; Peck 2005). These differences in classification demonstrate the need for a comprehensive phylogenetic analysis of group.

Early workers provided brief, unspecific descriptions of new species and illustrations were either missing or of poor quality (e.g., Bates 1885; Fabricius 1792; Newman 1840, 1841; Olivier 1790; White 1855). Improved work began with Gahan's description of *Pentomacrus fasciatus* in 1895. Gahan (1895) also recognized that White (1855) and other workers overlooked Fabricius' description with regard to *Pentomacrus femoratus* Fabricius (= *Plectromerus femoratus*). Other notable workers include Fisher, Linsley, and Zayas. Fisher was a prolific worker who described five new species of curiines from 1932 to 1947. Zayas (1975) described two Cuban species and provided illustrations to all described Cuban curiines except *P. ornatus* and *P. pumilus* in his revision of the family Cerambycidae. Recent works on the curiines have been provided by Micheli & Nearns (2005), Nearns (2006), Nearns & Branham (2005), Nearns & Ray (2006), Nearns & Steiner (2006), Nearns & Turnbow (2005), Nearns *et al.* (2005, 2006), Vitali (2004, 2006), and Vitali & Rezbanyai-Reser (2003).

Life History and Host Plant Associations

Little has been published about the life history and host plant associations for the majority of curiine species. With the exception of *C. dominicana*, all known curiine species have coarsely-faceted eyes and are thought to be nocturnal. This is supported by the observation that many species of *Curius* and *Plectromerus* have been collected at lights at night. The finely-faceted eyes of *C. dominicana* suggest that it may be diurnal.

Host plant associations for *P. dentipes*, a commonly collected species found in USA (eastern, southeastern, and Great Plains) have been provided by Linsley & Chemsak (1997) and Ree (2003). In general, curiines are collected by beating dead twigs and branches of various trees (Giesbert 1985; Ree 2003; Zayas 1975). *Plectromerus pinicola* is reported to have emerged from cut pine branches (Zayas 1975), *P. fasciatus* has been reared from girdled *Inga ingoides* (L.C. Rich.) Willd. (Fabaceae) branches (Chalumeau & Touroult 2005b), and *P. ramosi* has been reared from *Eugenia* near *ligustrina* (Sw.) Willd. (Myrtaceae) branches (Micheli & Nearns 2005). Females of *C. dentatus* were collected with pheromone-baited traps in Illinois (Lacey *et al.* 2004). Life history and host plant associations are not well understood for the majority of curiine species and merit further study.

Sexual dimorphism in pronotal and/or prosternal punctation has been noted in species from several cerambycine tribes (e.g., Casey 1912; Dusham 1921; LeConte 1873a; Linsley 1963; Mermudes & Napp 2000, 2004; Micheli & Nearns 2005; Monné & Napp 2005; Nearns & Steiner 2006). Nearns & Ray (2006) included the presence of male-specific pheromone gland pores as a morphological character for *C. chemsaki*. Histology and SEM studies of three cerambycine species revealed that male-specific punctures contain gland pores that are pheromone release sites (Iwabuchi 1986; Nakamuta *et al.* 1994; Noldt *et al.* 1995). Nearns & Ray (2006) identified male-specific gland pores (rounded, elevated tubercles with cir-

cular median impressions) on the pronota and prosterna of *C. chemsaki* (Fig. 2c), *C. dentatus*, *C. panamensis*, and *C. punctatus* and suggested that volatile pheromones may play a role in the reproductive behavior of these species. In addition, Nearns & Ray (2006) identified male-specific gland pores with a different structure on the prosterna of *P. dentipes*. Volatile pheromone production by curiine species is supported by the presence of *C. dentatus* in traps baited with synthetic pheromone (Lacey *et al.* 2004). A recent morphological survey by Ray *et al.* (2006) used SEM to identify male-specific gland pores in 49 additional cerambycine species, suggesting gland pores are an informative morphological character that provides information about natural history.

Fossils

Dominican amber is renowned for its well-preserved and highly diverse insect inclusions. These ancient resins formed from extinct *Hymenaea* L. (Fabaceae) trees from the mid-Miocene, approximately 17-20 MYO, and have yielded a rich fauna of over 400 families and 1500 species of insects (Grimaldi 1996; Grimaldi & Engel 2005). However, specimens of the beetle family Cerambycidae are not especially common in Dominican amber. Linsley (1961) observed that although cerambycid fossils were known from various parts of the world, they were generally not well studied. Approximately two dozen species of cerambycids were described from compression fossils of the Florissant (Meyer 2003) and a cerambycid in Dominican amber has been described by Martins & Galileo (1999).

At least eight fossil *Plectromerus* specimens are known from Dominican amber. Vitali (2004) described the first curiine fossil, *P. tertiarius*, from a partial specimen included in Dominican amber (Fig. 18b). Nearns & Branham (2005) described the second curiine fossil *P. grimaldii*, from Dominican amber and provided additional notes on the holotype of *P. tertiarius*. Poinar (1992) states that specimens of *Plectromerus* have been identified from Dominican amber. Evans & Bellamy (1996: plate 41) illustrated a well-preserved *Plectromerus* fossil which unfortunately was unavailable for study during the course of this research (G. Poinar, pers. comm.). Two additional *Plectromerus* fossils in excellent condition are deposited in the private collection of E. Morone, Italy (D. Grimaldi, pers. comm.) and another undetermined *Plectromerus* fossil is deposited in the American Museum of Natural History (No. DR-10-1857). Finally, two fossil *Plectromerus* are deposited in the private collection of F. Vitali (FVPC), identified by Vitali (2006) as the second known specimens of *P. tertiarius* and *P. grimaldii*.

MATERIALS AND METHODS

A phylogenetic species concept is applied in this study. Species are defined as the smallest aggregation of populations (sexual) or lineages (asexual) diagnosable by a unique combination of character states in comparable individuals (semaphoronts) (Nixon & Wheeler 1990).

Approximately 800 specimens from the following entomological collections were studied:

AMNH	American Museum of Natural History, New York, New York, USA
BMNH	The Natural History Museum, London, United Kingdom
CMNH	Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA
DHPC	Daniel Heffern Private Collection, Houston, Texas, USA
EFGC	Edmund F. Giesbert Collection, Gainesville (at FSCA), Florida, USA
EMEC	Essig Museum of Entomology, University of California, Berkeley, California, USA
ENPC	Eugenio H. Nearns Private Collection, Albuquerque, New Mexico, USA
FDZC	Fernando de Zayas Collection, Havana, Cuba
FSCA	Florida State Collection of Arthropods, Gainesville, Florida, USA
FTHC	Frank T. Hovore Private Collection, Santa Clarita, California, USA
FVPC	Francesco Vitali Private Collection, Genova, Italy
IESC	Instituto de Ecología y Sistemática, Havana, Cuba
INBio	Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica
JAMC	Julio and Charyn Micheli Private Collection, Ponce, Puerto Rico, USA

JEWC	James E. Wappes Private Collection, San Antonio, Texas, USA
LSAM	Louisiana State Arthropod Museum, Baton Rouge, Louisiana, USA
MCZ	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA
MNDR	Museo Nacional de Historia Natural, Santo Domingo, Dominican Republic
MNHN	Museo Nacional de Historia Natural, Havana, Cuba
MNRJ	Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil
MZSP	Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
REWC	Robert E. Woodruff Private Collection, Gainesville, Florida, USA
RFMC	Roy F. Morris Private Collection, Lakeland, Florida, USA
RHTC	Robert H. Turnbow, Jr. Private Collection, Ft. Rucker, Alabama, USA
SDPC	Sergio Devesa Private Collection, San Vicente, Spain
TAMU	Texas A&M University, College Station, Texas, USA
UCRC	University of California Entomology Research Collection, Riverside, California, USA
USNM	National Museum of Natural History, Smithsonian Institution, Washington, District of Columbia, USA
WIBF	West Indian Beetle Fauna Project, Michael A. Ivie, Bozeman, Montana, USA

Label redundancy among specimens is minimized by not repeating identical localities within a species treatment in Specimens Examined sections. Holotype and allotype label data are quoted verbatim, and placed in quotes. Character state observations of specimens were made using a Nikon SMZ800 stereomicroscope with 20× eyepieces equipped with a drawing tube. Habitus photographs were produced with a Microptics Digital Lab XLT photography system, an Auto-Montage Pro system, and a Nikon Coolpix 995 with an Optem microscope adapter. For detailed study of sexually dimorphic pronotal and prosternal punctation, specimens were imaged with a JEOL JSM-5510LV Scanning Electron Microscope operated at 1.5kV.

Specimen Preparation.—Male specimens were prepared for dissection by relaxing them in hot water for one hour. The aedeagus was extracted using a technique described by McDermott & Buck (1959). The apex of a #0 insect pin was bent forming a tiny hook. This was inserted into the abdominal opening and carefully retracted so that the hook caught the aedeagus, which is gently pulled from the abdomen. Using this technique, the aedeagus was extracted without damaging the exoskeleton. The extracted aedeagus was then prepared using a technique described by Lingafelter (1998) wherein it was placed in 10% KOH solution and heated for 10 minutes. This procedure removed tissues that would otherwise obscure the structures. It was observed that leaving the aedeagus in KOH solution longer than 30 minutes caused excessive clearing of the structures and distorted the setae at the tips of the parameres. The cleared aedeagus was placed in a watch glass containing 95% ethyl alcohol and the tegmen was separated from the median lobe using forceps and a camelhair brush under a Nikon SMZ800 stereo dissection microscope. A temporary slide was prepared to view the tegmen under a compound microscope. The tegmen was placed on a glass well-slide with the well filled with 95% ethyl alcohol and covered with a cover slip and positioned by carefully sliding the cover slip over the well, rotating the tegmen into the correct alignment. The temporary slide was viewed under a Nikon Eclipse E600 compound microscope with 2× Plan Apo bright field, 10× DIC Plan Apo, and 20× DIC Plan Apo compound objectives fitted with a drawing tube.

PHYLOGENETIC ANALYSIS

Introduction

Although the family Cerambycidae has received significant taxonomic attention over the last century, few phylogenetic analyses have been conducted to date on the group as a whole. Napp (1994) employed adult and larval morphological characters to test the phylogenetic relationships among subfamilies. She found Oxypeltidae and Disteniidae to be distinct from Cerambycidae. Also, she proposed two monophyletic subfamily groups within the Cerambycidae: Parandrinae + Prioninae, and Spondylinae + Lepturinae + Aseminae + Cerambycinae + Lamiinae (Napp 1994). Lingafelter (1998) conducted a generic-level

phylogenetic analysis of the tribe Elaphidiini (Cerambycinae) employing morphological characters and implied weighting parsimony. He included 99 taxa and 70 characters and found that monophyly of the tribe Elaphidiini was weakly supported by three characters (Lingafelter 1998). Monné conducted a phylogenetic analysis on the genus *Coccoderus* Buquet (Cerambycinae: Torneutini) based on 31 morphological characters and 12 taxa and found that monophyly of the genus was supported by five characters (M.L. Monné 2005). Monné & Napp (2005) conducted a generic-level cladistic analysis of the tribe Torneutini (Cerambycinae) based on 72 morphological characters and 31 ingroup taxa and found the tribe to be paraphyletic. The monophyly of Curiini and genera within the tribe has not previously been tested.

Ingroup Taxa

The ingroup taxa in our analyses consisted of 31 species of Curiini, including two fossil species from Dominican amber, *P. tertiarius* and *P. grimaldii* (Table 1). Due to specimen damage and obscured views in the fossil *P. tertiarius*, 28 of 39 morphological characters were coded as missing for this taxon. This resulted in a considerable amount of missing data (72%) for this taxon which severely degraded resolution due to the taxon's tendency to group with other taxa in multiple, disparate places because of ambiguities in coding (Table 1) (Nixon 1996). Therefore, this taxon was both included and excluded from analyses to examine the effects of doing so (e.g., Miller 2005).

Outgroup Taxa

A total of five outgroup taxa was selected from tribes traditionally near Curiini in the subfamily Cerambycinae (Nixon & Carpenter 1993). *Obrium maculatum* (Olivier) (Obriini) was chosen as the root taxon. In addition, the following outgroup taxa were included: *Coscinedes gracilis* Bates (Callidiopini); *Parommidion extricatum* Martins (Callidiopini); *Hypexilis pallida* Horn (Graciliini); and *Perigracilia delicata* Knull (Graciliini) (Table 1).

Characters and Their States

A total of 39 morphological characters was coded (19 binary, 20 multistate). Ten characters (27 states) were coded from the head, including eyes and antennae; 10 characters (30 states) from the prothorax; five characters (16 states) from the elytra and scutellum; nine characters (24 states) from the metafemora and metatibiae; four characters (11 states) from the mesosternum; and one character (four states) from male genitalic structures. All characters were run as non-additive and unweighted (Table 1).

The following is a description of the morphological characters and their states used in the phylogenetic analyses. Morphological characters were coded from both males and females (because little sexual dimorphism is present) unless indicated otherwise. Character and character state numbers refer to data coded in the data matrix for each taxon (Table 1). The data matrix was constructed and edited using the program WinClada (Nixon 1999–2002). Inapplicable data was coded as missing data (Strong & Lipscomb 1999).

1. Eye shape.
0 = ovate (Fig. 37a).
1 = ovate-emarginate (Fig. 37b).
2 = subreniform (Fig. 37c).
State 2 is the general condition in *Plectromerus*.

2. Longest antennomere(s).
0 = scape.
1 = third.
2 = fifth.
3 = eleventh.
4 = third and fifth longest.
This character has been used historically to separate *Curius* and *Plectromerus*. *Curiosa dominicana* is unique among curiines for having the scape as the longest antennomere. State 2 is the general condition in *Plectromerus*. In *Curius*, the third is longest (*C. dentatus*, *C. panamensis*, *C. punctatus*) or the third is equal to the fifth (*C. chemsaki*).

3. Scape with long, suberect or erect setae on dorsal surface.
0 = absent.
1 = present.

4. Base of scape with depression on dorsal surface.
0 = absent (Fig. 38a).
1 = shallow (Fig. 38b).
2 = deep (Fig. 38c).
This character is present in only three species: *P. femoratus*, *P. josephi* new species, and *P. turnbowi* new species, all from the Greater Antilles.

5. Length of third antennomere compared to fourth.
0 = about 1.3 times longer or less (Fig. 39a).
1 = about 1.5 times longer (Fig. 39b).
2 = about 1.7 times longer or more (Fig. 39c).

6. Length of fifth antennomere compared to fourth.
0 = about 1.3 times longer or less (Fig. 40a).
1 = about 1.5 times longer (Fig. 40b).
2 = about 1.7 times longer or more (Fig. 40c).
Curius dentatus and *C. punctatus* have the fifth antennomere equal to or only slightly longer than fourth. The fifth antennomere is about twice as long as fourth in *C. chemsaki* and *C. panamensis* and is a good character for separating those species from the other two species in the genus.

7. Antennae annulate.
0 = absent (Fig. 41a).
1 = present (Fig. 41b).
State 1 is the general condition in all *Curius* species but is also present in two *Plectromerus* species (*P. dentipes* and *P. exis*).

8. Antennomeres 6-10 flattened.
0 = absent.
1 = present.
State 0 is the general condition in *Curius*. State 1 is the general condition in *Plectromerus*.

9. Antennomeres 6-10 produced externally at apices on outer margins.
0 = absent (Fig. 42a).
1 = present (Fig. 42b).
State 0 is the general condition in *Curius*. State 1 is the general condition in *Plectromerus*.

10. Antennal length.
0 = less than 1.3 times as long as body.
1 = 1.3 times longer than body or more.

11. Pronotum with long, suberect setae anterolaterally.
0 = absent.
1 = present (Fig. 43a).
State 1 is the general condition in both *Curius* and *Plectromerus*.

12. Pronotum, sub-medial, basal third of disk with 1-4 long, suberect setae arising from deep puncture.
0 = absent.
1 = present (Fig. 43b).
State 1 is the general condition in *Plectromerus*.

13. Pronotum, anterior portion of disk strongly shining (glossy).
0 = absent.
1 = present.

14. Pronotum, dorsal surface.
0 = microsculptured with sparse, shallow punctation (Fig. 44a).
1 = granulose (Fig. 44b).
2 = punctate with glabrous areas (Fig. 44c).
3 = microsculptured with punctures interspersed (Fig. 44d).
4 = heavily, evenly punctate (Fig. 44e).
State 1 is the general condition in *Curius*.

15. Pronotum, dorsal surface setae.
0 = without scattered, long, suberect setae.
1 = with sparsely scattered, long, suberect setae.
2 = with densely scattered, long, suberect setae.

16. Pronotum ornamented with distinct "inverted Y" marking.
0 = absent (Fig. 45a).
1 = present (Fig. 45b).
The presence of this character is a synapomorphy of *Curius* and is not present in any known *Plectromerus* species.

17. Pronotal sides.
0 = nearly parallel, slightly inflated (widest) at middle (Fig. 46a).
1 = widest area distinctly behind middle (Fig. 46b).
2 = evenly rounded, nearly cylindrical (Fig. 46c).
3 = sides tuberculate or protuberate (Fig. 46d).
4 = globose, sides broadly rounded (Fig. 46e).
State 2 is the general condition in *Curius*; state 0 is the general condition in *Plectromerus*.

18. Pronotal constriction.
0 = somewhat evenly constricted at apex and base (Fig. 47a).
1 = slightly more constricted at base than apex (Fig. 47b).
2 = slightly more constricted at apex than base (Fig. 47c).
3 = strongly constricted at base (Fig. 47d).
State 0 is the general condition in *Curius*; state 1 is the general condition in *Plectromerus*.

19. Pronotal disk.

0 = without calli (Fig. 48a).

1 = with one slightly raised, median callus at about the center, with two slightly raised, submedial calli slightly anterior to center, and two slightly raised, submedial calli slightly posterior to center (Fig. 48b).

2 = with one moderately raised, median callus at about the center, with two moderately raised, submedial calli slightly anterior to center, and two moderately raised, submedial calli slightly posterior to center (Fig. 48c).

State 0 is the general condition in *Curius*.

20. Males with sexually dimorphic prothoracic punctuation.

0 = absent (Fig. 49a).

1 = present (Fig. 49b-f).

The presence of sexually dimorphic, prothoracic punctation in male cerambycines has been noted by several workers.

21. Scutellum surface granulose.

0 = absent.

1 = present.

This character is present in two species of *Curius* (*C. chemsaki* and *C. panamensis*).

22. Scutellum with dense setae.

0 = absent.

1 = present.

23. Elytral disk concave medially, subsuturally.

0 = absent.

1 = shallow.

2 = shallow to moderately deep.

24. Elytral apices.

0 = broadly rounded (Fig. 50a).

1 = narrowly rounded (slightly constricted or pointed) (Fig. 50b).

2 = subtruncate / rounded (Fig. 50c).

3 = strongly truncate, straight across (Fig. 50d).

4 = strongly truncate, concave across (Fig. 50e).

5 = outer margins with large, acute spine (Fig. 50f).

6 = inner margins forming a blunt, curved point (Fig. 50g).

25. Elytral setae.

0 = without scattered long, suberect setae.

1 = with scattered long, suberect setae.

26. Prosternal process between procoxae.

0 = thin, about 0.1 times width of procoxal cavity (Fig. 51a).

1 = moderate in width, about 0.2 times width of procoxal cavity (Fig. 51b).

2 = wide, about 0.3 times width of procoxal cavity (Fig. 51c).

27. Procoxal cavities.

0 = closed (Fig. 52a).

1 = narrowly open, nearly closed (Fig. 52b).

2 = widely open (Fig. 52c).

State 2 is the general condition in the curiines.

28. Prosternal process between procoxae.

0 = nearly flat, not declivous (Fig. 53a).

1 = gradually declivous (Fig. 53b).

2 = abruptly declivous (Fig. 53c).

State 0 is the general condition in *Curius*; state 1 is the general condition in *Plectromerus*.

29. Mesosternum with broad mesocoxal process with lateral extensions into mesocoxae.

0 = absent.

1 = present (Fig. 54).

30. Metafemoral armature.

0 = no tooth present (Fig. 55a).

1 = with one sharp tooth (Fig. 55b).

2 = with two sharp teeth (Fig. 55c).

State 1 is the general condition for *Curiosa*, *Curius*, and *Plectromerus*.

31. If metafemur armed with one sharp tooth, then tooth with serrations on posterior margin.

0 = absent (no serration peaks) (Fig. 56a).

1 = feebly serrate (small, indistinct peaks) (Fig. 56b).

2 = moderately serrate (moderate sized) (Fig. 56c).

3 = strongly serrate (deep, distinct peaks) (Fig. 56d).

32. Metafemur with long, erect setae.

0 = absent.

1 = present (Fig. 57a).

33. Metafemora: distal portion distinctly darker than basal.

0 = absent.

1 = present (Fig. 57b).

State 1 is the general condition in *Curius*.

34. Basal (non-clavate) portion of metafemora compared to metafemoral club.

0 = distinctly longer (Fig. 58a).

1 = about equal (Fig. 58b).

2 = distinctly shorter (Fig. 58c).

State 1 is the general condition in *Plectromerus*.

35. Metafemoral shape.

0 = gradually enlarged from base, not pedunculate-clavate (Fig. 59a).

1 = pedunculate-clavate (Fig. 59b).

State 0 is the general condition in *Curius*.

36. Metatibial shape.

0 = nearly straight (Fig. 60a).

1 = moderately sinuate (Fig. 60b).

2 = strongly sinuate (Fig. 60c).

37. Length of metatibia in relation to metafemur.

0 = about equal length (Fig. 61a).

1 = slightly shorter, about 0.7 times length (Fig. 61b).

2 = distinctly shorter, about 0.5 times length (Fig. 61c).

38. Metatarsus with first tarsomere about twice as long as second.

0 = absent (Fig. 62a).

1 = present (Fig. 62b).

The presence of this character is a synapomorphy of *Curius*.

39. Male genitalia.

0 = parameres with more than three short setae projecting from tips of lateral lobes (Fig. 63a).

1 = parameres with two long setae projecting from tips of lateral lobes (Fig. 63b).

2 = parameres with more than three long setae projecting from tips of lateral lobes.

3 = parameres with three short setae projecting from tips of lateral lobes.

Several authors have employed characters of the parameres (e.g., Entwistle 1963; Fragoso 1978; Franceschini 2002; Komiya & Nylander 2005; Lingafelter 1998; Marques & Napp 2003; Mermudes & Napp 2004; Micheli & Nearns 2005; M.L. Monné 2005; Monné & Napp 2005; Veiga-Ferreira 1964). The morphological characters present in the parameres of male Curiini were not found to be useful for species identification. However, the number and length of setae at the tips of the parameres were useful as a generic-level character. No male specimens were available for dissection for *C. dominicana*, *P. acunai*, *P. femoratus*, *P. giesberti* new species; *P. grimaldii*, *P. josephi* new species, *P. michelii* new species, *P. serratus*, *P. tertiarius*, *P. thomasi* new species, and *P. unidentatus*. This character was coded as missing for these taxa.

Phylogenetic Analysis Methods

Phylogenetic analyses were performed using parsimony as the optimality criterion implemented in TNT 1.0 (Goloboff *et al.* 2005) using traditional (heuristic) search. The commands "50 replications" and "25 trees saved per replication" were used to find the most parsimonious trees. Consistency Index (CI) and Retention Index (RI) were calculated in WinClada. Bremer support values (Bremer 1994) were calculated using NONA (Goloboff 1995) by reading in the consensus of the most parsimonious cladograms and using the commands "hold 1000; sub 1; find*", "hold 2000; sub 3; find*", "hold 4000; sub 5; find*", and "bsupport 10." Bootstrap support values were calculated in NONA as implemented by WinClada using 1,000 replications, 10 search replicates, and five starting trees per replicate without doing a "max*" search and saving the consensus of each replication.

Results

Phylogenetic analyses of 36 taxa (including the fossil *P. tertiarius*) and 39 morphological characters produced 19 most parsimonious trees of length 180. The strict consensus of 19 most parsimonious trees is poorly-resolved within the *Plectromerus* + *Curiosa* clade (Fig. 73). Phylogenetic analyses of 35 taxa (excluding the fossil *P. tertiarius*) and 39 morphological characters produced two most parsimonious trees (L = 180, CI = 40, RI = 61). The strict consensus of two most parsimonious trees supports the genus *Curius* as a monophyletic group that is characterized by five unambiguous synapomorphies (Fig. 75). The genus *Plectromerus* is supported by four unambiguous synapomorphies and is monophyletic with the monotypic genus *Curiosa* as a derived member of the *Plectromerus* clade. As historically defined, the tribe Curiini is polyphyletic due to four outgroup taxa (*Coscinedes gracilis*, *Hypexilis pallida*, *Parommidion extricatum*, and *Perigracilia delicata*) being placed between the *Curius* and *Plectromerus* + *Curiosa* clades (Fig. 75). Bremer support values

Table 1. Data matrix for 36 taxa and 39 morphological characters used in cladistic analysis of *Curius* and *Plectromerus*. Inapplicable character states are marked with '-' and unobserved character states with '?'

	1	10	20	30
Obrium maculatum	121000100	0111210330	0001010000	0-11200010
Coscinedes gracilis	130000011	0000400410	?001302000	0-00210103
Hypexilis pallida	130001010	1000330120	?000101210	0-00200010
Perigracilia delicata	130001000	1000100120	0001100210	0-00200002
Parommidion extricatum	130000011	0110300300	1011411211	0-10100012
Curius chemsaki	210022110	1100101200	1101601201	1101021110
Curius dentatus	110010110	0100101200	1001001201	1101200010
Curius panamensis	140022110	1100101200	1101101201	1101100110
Curius punctatus	110010110	0100101200	1002101201	1001200210
Plectromerus acunai	220022011	0111200010	1002501211	110110010?
Plectromerus bidentatus	220022011	0111200010	1002511221	2?01101201
Plectromerus dentipes	220022111	0111200010	1002301211	1201111201
Plectromerus dezayasi new species	220022011	0110000011	1002001211	1301112101
Plectromerus distinctus	220012011	0111310010	1002111211	1200112201
Plectromerus dominicanus	001011011	0110310010	?010012111	101111000?
Plectromerus exis	120012111	1100300010	0002201211	1101010201
Plectromerus fasciatus	221022011	0110310010	1001331211	1110100001
Plectromerus femoratus	220222010	1110300410	0001001211	110021000?
Plectromerus giesberti new species	220012011	0110000010	?002001211	130011220?
Plectromerus grimaldii †	220022011	011?2?001?	?0012?1211	100010000?
Plectromerus hovorei new species	220022011	0110300010	1002001211	130011220?
Plectromerus josephi new species	220122011	0110300011	1002101211	110111120?
Plectromerus lingafelteri	220022011	0110300010	1002001211	1101111101
Plectromerus michelii new species	220012011	0110310010	?001111211	110011120?
Plectromerus morrisi new species	021012011	0111310010	1002011111	1311112201
Plectromerus navassae	221012011	0110310010	1001111211	1210211101
Plectromerus ornatus	220012011	0110300010	1002001211	1100210101
Plectromerus pinicola	220012011	0111200010	1002001211	1100200101
Plectromerus pumilus	220012011	0111200010	1002001211	1100111001
Plectromerus ramosi	220022011	0110200010	1002101211	1300101201
Plectromerus serratus	220022011	0110300010	1002101211	130011220?
Plectromerus tertiarius †	??2??2011	0??????01?	????0?????	1?????????
Plectromerus thomasi new species	220002011	0111010021	?001001211	100111010?
Plectromerus turnbowi new species	220122011	0111300010	1001201211	1100200001
Plectromerus unidentatus	220012011	0111300010	1000001211	110011120?
Plectromerus wappesi	221012011	0110310010	1002211211	1210212201

ranged from 1 to 4. A relatively high Bremer support value of 4 was reported for the *Curius* clade as well as the node containing *C. chemsaki* + *C. panamensis* (within the *Curius* clade). Relatively lower branch support values of 3 and 2 were reported for the node containing *P. dominicanus* + *P. morrisi* new species and the *Plectromerus* + *Curiosa* clade respectively (Fig. 75). Bootstrap support values greater than 70% were reported for the *Curius* clade, the node containing *C. chemsaki* + *C. panamensis* (within the *Curius* clade), and the node containing the two outgroup taxa from the tribe Graciliini (*Hypexilis pallida* + *Perigracilia delicata*) (Fig. 75).

Discussion

Inclusion of the fossil *P. tertiarius* resulted in decreased resolution within the *Plectromerus* + *Curiosa* clade (Fig. 73). The lack of resolution appears to be due to the fact that many characters for this taxon could not be scored due to the condition of the fossil (28 of 39 or 72% of characters were coded as missing) (Nixon 1996). Phylogenetic analysis of Curiini excluding the fossil *P. tertiarius* produced a well-resolved strict consensus (Fig. 75) of two most parsimonious trees (Fig. 74). CI and RI for the two most parsimonious trees are both low (40 and 61, respectively), indicating high levels of homoplasy among the characters coded.

Results suggest that the tribe Curiini, as historically defined, is a polyphyletic group regardless of the outgroup taxon used as the root. Four outgroup taxa in the tribes Callidiopini and Graciliini are placed within Curiini, between the *Curius* and *Plectromerus* + *Curiosa* clades (Fig. 75). However, traditional ideas of generic circumscription for *Curius* and *Plectromerus* were supported. To address the polyphyly of Curiini, the new tribe Plectromerini Nearns & Branham is proposed below. Relationships among ingroup and outgroup taxa require a larger analysis within the subfamily Cerambycinae, but that is beyond the scope of this study.

Results support Giesbert's (1985) synonymy of the genus *Pentomacrus* with *Plectromerus*, with the five species originally described within the genus *Pentomacrus* (*P. acunai*, *P. distinctus*, *P. fasciatus*, *P. femoratus*, and *P. serratus*) not supported as a monophyletic group (Fig. 75). The transfer of *P. punctatus* to *Curius* by Nearns *et al.* (2005) is also supported (Fig. 75).

Interestingly, the monotypic genus *Curiosa* appears to be a highly derived *Plectromerus* species (Fig. 75). While no known males of this species have been collected and only three females specimens were available for study, we think that synonymizing *Curiosa* with *Plectromerus* is justified based on the character data that places it within *Plectromerus*. It is curious that *Curiosa* has been traditionally treated as a monotypic genus, when in fact this analysis, which is the first empirical study of this group, suggests it is a highly derived *Plectromerus* on a comparatively long branch of seven characters. This long branch is evidence that this species underwent significant evolution in comparison to other *Plectromerus* species. This may be due to the hypothesis that this species has shifted from a nocturnal habit (a condition of all other *Curius* and *Plectromerus* species) to a diurnal habit.

BIOGEOGRAPHY

Introduction

The Caribbean (Fig. 64) has a long and exciting history of biogeographic study (Allen 1911; Darlington 1938; Hedges 1996a; Hedges 1996b; Hedges *et al.* 1992; Iturralde-Vinent & MacPhee 1999; Rosen 1975) with a focus on the large, mountainous islands of the Greater Antilles (Cuba, Hispaniola, Jamaica, and Puerto Rico). Work in the area has often reflected popular "notions" of the time. Early workers proposed land bridges to explain distributions of the Caribbean mammal fauna (Allen 1911). Subsequent workers supported a passive dispersal model of Caribbean biogeography (Darlington 1938; Hedges 1996a; Hedges 1996b). Recently, however, Iturralde-Vinent & MacPhee (1999) discussed two main models of faunal formation in the Greater Antilles: strict dispersal and strict continent-island vicariance, and proposed a model that combines dispersal and vicariance in a two-phase process.

Rosen (1975) argued for a vicariance model of Caribbean biogeography which incorporated a geophysical model based on Malfait & Dinkelman's (1972) plate-tectonic model of Caribbean evolution, in which the Caribbean was formed from an original East Pacific Plate intrusion into the western Atlantic. Rosen's model predicts that the biota of the Greater Antilles is relatively older than that of the Costa Rican-Panamanian region

(Rosen 1975: 455). It also predicts that lower Central American taxa will be more closely related to mainland (North and South American) taxa than to those of the Antilles (Rosen 1975: 455).

Hedges (1996a, 1996b) and Hedges *et al.* (1992) were critical of Rosen's (1975) vicariance model and argued for a passive dispersal model (e.g., rafting) of Caribbean biogeography. In this model, water currents in the Caribbean generally move in a west, north-west direction, moving water and flotsam from the Amazon and Orinoco basins to the Greater Antilles. Hedges predicts that it should be very difficult to colonize islands against the prevailing water currents (from Cuba to Puerto Rico, for example), but very easy to go with the current, for example from Hispaniola to Cuba.

Iturralde-Vinent & MacPhee (1999) were critical of Hedge's hypothesis of mostly over-water dispersal and proposed the GAARlandia (Greater Antilles + Aves Ridge) hypothesis which combines elements of both vicariance and dispersal (Iturralde-Vinent & MacPhee 1999; MacPhee & Iturralde-Vinent 1995). The GAARlandia hypothesis proposes that the developing northern Greater Antilles and northwestern South America were briefly connected by a "landspan." The uplift event that created these connections was completed by 32 MYO which ended the GAARlandia landspan phase. Subsequently, tectonic activity in the Caribbean has resulted in the subdivision of existing land areas (Iturralde-Vinent & MacPhee 1999).

Biogeographic Analysis Methods

The strict consensus of two most parsimonious trees (Fig. 75) was used to create a taxon-area cladogram by mapping geographic areas of distribution for each ingroup taxon in the analysis (Fig. 76).

Results

Results suggest that the more basal taxa within the *Curius* clade are distributed in North America (USA) and the Greater Antilles (Cuba) while the more derived taxa are endemic to Central America (Panamá) and South America (Venezuela) (Fig. 76). Within the *Plectromerus* clade, a similar pattern is observed in which the more basal species exhibit an Antillean distribution (Greater and Lesser Antilles) while the more derived taxa occur in North America (USA, Mexico), Central America (Costa Rica, Guatemala, Honduras, Nicaragua, and Panamá), as well as the Greater and Lesser Antilles (Fig. 76).

Discussion

The Caribbean (Fig. 64) is a complex geographic region and home to a diverse flora and fauna with a high rate of endemicity among insects (Genaro & Tejuca 2001; Liebherr 1988; Monné & Hovore 2005; Peck 2005). For example, Swearingen (1999) estimated that as much as 30% of the invertebrate fauna on Navassa Island (Greater Antilles) is endemic, and Liebherr (1988) reports that as much as 40% of Antillean ant species are single-island endemics.

Like many vertebrate and invertebrate taxa in the Caribbean, *Curius* and *Plectromerus* exhibit high levels of endemicity (Table 2). The majority of *Curius* and *Plectromerus* species are found in the Greater Antilles, with 17 of 31 species (55%) occurring on the islands of Cuba and Hispaniola (Dominican Republic and Haiti). The highest level of diversity is on Hispaniola, with 11 *Plectromerus* species, 10 of which are endemic to the island. From the two described *Plectromerus* fossils in Dominican amber, dated from mid-Miocene, a minimum date of approximately 17-20 MYO is known for the presence of *Plectromerus* on Hispaniola. Cuba ranks second with seven species, including four endemic species. Two endemic species of *Plectromerus* occur on Jamaica. Navassa Island, situated between Jamaica and Haiti, has one endemic species as do the Cayman Islands. Only two species are presently known from the Lesser Antilles (Table 2).

Four *Curius* and *Plectromerus* species are widely distributed: *C. dentatus* is known from USA and *P. dentipes* occurs in USA, Bahamas, and Cuba. *Plectromerus exis* is fairly widespread in the Greater Antilles (Cuba, Jamaica, and Hispaniola). *Plectromerus wappesi*, originally described from southeastern Mexico, is the only species known to occur in both the Greater Antilles (Jamaica) and Central America (Honduras).

Rosen's (1975) vicariance model of Caribbean biogeography predicts that the biota of the Greater Antilles is relatively older than that of the Costa Rican-Panamanian region and that the lower Central American taxa will be more closely related to mainland (North and South America)

Table 2. Biogeographic distribution of *Curius* and *Plectromerus*.

	Biogeographic Region																		
				Greater Antilles						Lesser Antilles				Central America				
Taxa	USA	Bahamas	Mexico	Cuba	Hispaniola	Jamaica	Navassa Island	Cayman Islands	Puerto Rico	Virgin Islands	Montserrat	St. Vincent	Grenada	Guatemala	Honduras	Nicaragua	Costa Rica	Panamá	Venezuela
C. chemsaki																			+
C. dentatus	+																		
C. punctatus				+															
C. panamensis																		+	
P. acunai				+															
P. bidentatus					+														
P. dentipes	+	+		+															
P. dezayasi n. sp.																+			
P. distinctus					+														
P. dominicanus					+														
P. exis				+	+	+													
P. fasciatus											+	+	+						
P. femoratus						+													
P. giesberti n. sp.														+					
P. grimaldii †					+														
P. hovorei n. sp.															+		+		
P. josephi n. sp.					+														
P. lingafelteri					+														
P. michelii n. sp.								+											
P. morrisi n. sp.																		+	
P. navassae							+												
P. ornatus				+															
P. pinicola				+															
P. pumilus		+		+															
P. ramosi									+	+									
P. serratus					+														
P. tertiarius †					+														
P. thomasi n. sp.					+														
P. turnbowi n. sp.					+														
P. unidentatus						+													
P. wappesi			+			+									+				
Totals	2	2	1	7	11	4	1	1	1	1	1	1	1	1	2	1	1	2	1

taxa than to those of the Antilles (Rosen 1975: 455). Rosen's (1975) model adequately explains the results of a biogeographical analysis of *Curius* and *Plectromerus* which suggests that the more basal taxa within the *Plectromerus* clade exhibit an Antillean distribution while the more derived taxa occur in North America, Central America, as well as the Antilles (Fig. 76).

SYSTEMATICS OF CURIINI

Tribe Curiini LeConte

Curii LeConte, 1873a: 304. Type genus: *Curius* Newman, 1840.

Diagnosis.—Curiini is superficially similar to Plectromerini new tribe but is easily distinguished by the third antennomere distinctly longer than scape (third antennomere about as long or distinctly shorter than scape in Plectromerini); and prosternal process between procoxae nearly flat, not gradually declivous (prosternal process between procoxae gradually or abruptly declivous in Plectromerini).

Redescription.—Form depressed, elongate. Head with front small, declivous; eyes coarsely faceted; palpi somewhat unequal; mandibles small, acute; antennal tubercles not prominent to strongly raised; antennae slender, annulated, finely punctate and pubescent; third antennomere about 1.5 times longer than fifth. Pronotal sides evenly rounded, nearly cylindrical; pronotum ornamented with a distinct "inverted Y" marking. Prosternal coxae globose, prominent, nearly contiguous, cavities open behind. Males with sexually dimorphic, prothoracic punctation. Femora gradually clavate, armed beneath with a small, acute tooth. Posterior edge of metafemoral tooth is smooth or nearly smooth.

Remarks.—Results of a phylogenetic analysis of Curiini suggest that the tribe, as traditionally defined, is a polyphyletic group (see Phylogenetic Analysis above). As redefined here, Curiini contains only the genus *Curius*.

Checklist

Curius Newman, 1840: 17.
- ***chemsaki*** Nearns & Ray, 2006: 51.
- ***dentatus*** Newman, 1840: 17.
  - *concinnatus* Haldeman, 1847: 43.
- ***panamensis*** Bates, 1885: 268.
- ***punctatus*** (Fisher, 1932: 55).

Genus *Curius* Newman

Curius Newman, 1840: 17. Type species, *Curius dentatus* Newman, 1840, by monotypy.

Diagnosis.—see diagnosis for tribe above.

Redescription.—see redescription for the tribe above.

Distribution.—USA (eastern, southeastern, Great Plains), Cuba (Greater Antilles), Panamá (Central America), and Venezuela (South America) (Fig. 65).

Remarks.—Results of a phylogenetic analysis suggest that the genus *Curius* is a monophyletic group that is characterized by five unambiguous synapomorphies (Fig. 75).

Linsley (1963) redefined the genus based on the only North American species, *C. dentatus*. Based on Bates' (1885) original description and figure, Linsley (1963) expressed doubt about the placement of the only other *Curius* species known at the time of his writing, *C. panamensis*. During the course of this revision, a new species of *Curius*, *C. chemsaki* Nearns & Ray was described from Venezuela and Nearns *et al.* (2005) transferred *P. punctatus* to *Curius*. A detailed examination of the pronotal and prosternal punctation of *C. dentatus*, *C. panamensis*, *C. punctatus*, and *C. chemsaki*, revealed a new synapomorphy for the genus overlooked by previous workers, male-specific gland pores (rounded, elevated tubercles with circular median impressions) (Nearns & Ray 2006).

KEY TO SPECIES OF *CURIUS*

1. Fifth antennomere equal to or only slightly longer than fourth. 2
Fifth antennomere about twice as long as fourth 3
2(1). Antennae not distinctly flattened; distal half of femora distinctly darker than basal half; body length 5.5– 10 mm (USA) . . . . . ***C. dentatus* Newman** (Fig. 3a)
Antennae distinctly flattened; femoral knees distinctly darker; body length 9.0–12.5 mm (Cuba) . . . . . ***C. punctatus* (Fisher)** (Fig. 5a)
3(1). Third antennomere armed with spine, equal to or slightly shorter than fifth; pronotum and elytra clothed with short, pale, recumbent, moderately dense hairs; body length 6.5-15 mm (Panamá) . . . . . ***C. panamensis* Bates** (Fig. 4a)
Third antennomere without spine, slightly longer than fifth; pronotum and elytra not as above; body length 7.5–8.6 mm (Venezuela) . . . . . ***C. chemsaki* Nearns & Ray** (Fig. 1a)

***Curius chemsaki* Nearns & Ray**
(Figs. 1a–b, 2a–d)

Curius chemsaki Nearns & Ray, 2006: 51.

Diagnosis.—This species is distinguished from its presently known congeners by the following characters: the third antennomere is longest, slightly longer than the fifth and without a spine, the fifth antennomere is about twice as long as the fourth, and the elytral apices are separately pointed. *Curius chemsaki* can be confused with *C. panamensis* and the two species share similar pronotal proportions and markings (Figs. 1a-b, 1e, 4a) as well as similar pronotal and prosternal punctation and nodules. However, *C. chemsaki* is distinguished by antennal morphology: both sexes of *C. panamensis* have a strong spine at the apex of the third antennomere (absent in *C. chemsaki*) and the third antennomere is equal to or slightly shorter than the fifth in *C. panamensis* (the third antennomere is slightly longer than the fifth in *C. chemsaki*). Also, the pronotum and elytra of *C. panamensis* are clothed with short, pale, recumbent, moderately dense hairs (absent in *C. chemsaki*) and the elytral apices of *C. panamensis* are rounded (separately pointed in *C. chemsaki*).

Specimens examined.—*Type material:* Holotype ♂, "**VENEZUELA**, **Aragua Province**, Rancho Grande, II-14-21–1969, P. & P. Spangler, collected at blacklight" (USNM). Allotype ♀, "**VENEZUELA**, **Aragua Province**, El Encantado, 30-VI-2001, Cope collection" (JAMC).

Other material: **VENEZUELA: Aragua Province:** Rancho Grande, 1100 m, 17–20-I-1978, blacklight, cloud forest, J.B. Heppner, 1♀ [paratype] (USNM); same except Geremba, 2050 m, VII-1991, 2♀ [paratypes] (MNRJ); same except VII-1999, Alain Audureau, 1♂ (ENPC); same except 22-XI-2002, 1♀ (ENPC); same except 23-IX-2002, 1♀ (ENPC); same except VII-2002, 1♀ (RFMC); same except Magua, 28-V-2005, 2♀ (ENPC, FSCA). **Mérida Province**: Parque Nacional Sierra Nevada, Est. La Mucuy, 08°37'N, 71°02'W, cloud forest, 2380 m, 14–16-VI-1999, Ratcliffe, Jameson, Smith, Vilaboro, 1♀ (JEWC).

Distribution.—Known from Aragua and Mérida Provinces, Venezuela (South America) (Fig. 65).

Remarks.—A discussion of sexual dimorphism in pronotal and/or prosternal punctation in *P. chemsaki* is presented in the "Life history and host plant associations" section above.

Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype. Twelve additional specimens of *C. chemsaki* have been reported by Alain Audureau (Saint Gilles Croix de Vie, France): Venezuela, Aragua Province, Geremba, 2050 m, Alain Audureau, collection dates: 12-IV-1999, 15-V-1999, 9-VI-2000, 29-IX-2002, 15-II-2003, 7-IV-2003, 21-II-2004, 12-V-2005, 14-V-2005.

***Curius dentatus* Newman**
(Figs. 1c, 3a–c)

Plectromerus concinnatus Dejean, 1833: 332. *Nomen nudum.*
Curius dentatus Newman, 1840: 17.
Plectromerus concinnatus Haldeman, 1847: 43. Attributed to Dejean.
Curius concinnatus: Melsheimer, 1853: 106.

Diagnosis.—This species is similar to *C. punctatus* but is separated by the following characters: eyes nearly subreniform (eyes ovate-emarginate in *C. punctatus*); antennae weakly flattened (more strongly flattened in *C. punctatus*); and femora with distal half distinctly darker in most specimens (femora with knees distinctly darker in *C. punctatus* (Fig. 5c)).

Specimens examined.—**USA: Alabama**: Baldwin Co., reared from pecan, VII-1972, 1♂ (JEWC); Mobile, at light, 12-V-1957, B.K. Dozier, 1♂ (FSCA). **District of Columbia:** Washington, Henry Ulke, 5♂, 2♀ (CMNH); M.L. Linell, 1♀ (AMNH); 20.6, Hubbard & Schwarz, 1♂ (USNM). **Florida**: Alachua Co., Gainesville, 22-V-1983, M.C. Thomas, 1♂ (FSCA); same except at light, V-1964, Grace Thomas, 1♀ (FSCA); same except 2-IX-77, T.H. Atkinson, 3♂, 1♀ (FSCA); Dade Co., Miami, V-1917, 1♂, 2♀ (CMNH); same except IV-16, 1♂ (CMNH); Dixie Co., 4 miles N Old Town, 18–20-V-1978, E. Giesbert, 8♂, 1♀ (EFGC); same except 11–12-V-1978, 2♂ (EFGC); Franklin Co., Apalachicola, *Taxodium distichum* reared, 10-XI-05, W.F. Fiske, 2♀ (USNM); same except *Juniperus* reared, 19-VI-05, 2♀ (USNM); Gadsden Co., Aspalaga Landing, UV light, 29-V-2005, Nearns, Morris & Wappes, 1♀ (ENPC); Hernando Co., Withlacoochee State Forest, Croom Area, beating dead branches, 26-VII-2003, E.H. Nearns, 1♀ (ENPC); Highlands Co., Archbold Biological Station, 14–18-IV-1989, Chen Wen Young, 1♀ (CMNH); Indian River Co., SR512 0.5 miles W I-95, Fla. Med. Ent. Lab., Suction trap, 1–10-V-1977, 1♀ (FSCA); Lake County, Alexander Springs Campground, 6 miles S Astor Park, at UV black light, 21-IV-1975, J.B. Heppner, 1♀ (FSCA); Leon Co., Tall Timbers Res. Sta., Hammock Wood Yard, light trap, 15-VIII-1972, 1♀ (FSCA); Liberty Co., Torreya State Park, at UV light, flood plain forest, 22-V-2004, E.H. Nearns, 1♂ (ENPC); Polk Co., vicinity of Bartow, along Peace River, 29-IV-1990, R. Morris, 1♀ (FSCA); same except 24-IV-1990, 1♂ (FSCA); Putnam Co., Crescent City, Hubbard & Schwarz, 1♂ (USNM). **Georgia**: Clarke Co., Whitehall Forest, 2-VII-1973, R. Turnbow, 1♀ (AMNH); same except 14-VII-1976, 1♀ (FSCA); same except ex. sweet gum, emerged VII-1974, 1♂ (FSCA); same except Athens, 25-VI-1972, 1♂ (AMNH); same except window trap, 31-VII-6-VIII-1976, 1♂ (AMNH); same except 6–13-VIII-1976, 1♂, 1♀ (USNM); same except 20–27-VIII-1976, 2♀ (USNM); same except 24–31-VII-1976, 1♀ (FSCA); same except 25-VI-2-VII-1976, 2♀ (FSCA); same except 16–23-VII-1976, 1♂, 1♀ (FSCA); same except 9–16-VII-1976, 1♂ (FSCA); same except 6–13-VIII-1976, 1♂ (USNM); Dekalb Co., 13-VI-69, 1♀ (TAMU); same except 1-VIII-79, 1♀ (JEWC); Grady Co., Beachton, 1–7-VII-1967, E.V. Komareck, 1♂ (USNM); Greene Co., reared from pecan, VII-1972, 1♂ (JEWC); Jackson Co., Hardeman Forest, 5–7-VIII-1975, R. Turnbow, 1♀ (AMNH); Marion Co., Buena Vista, 3-VII-46, John Lutz, 1♂ (USNM); Sumter Co., host: pecan, 1982, W.L. Tedders, 4♂, 3♀ (USNM); Griffen, Deodar, reared, 1-VI-06, W.F. Fiske, 1♂ (USNM); same except 3744, 18-VII-06, 1♂ (USNM); same except XII-07, 1♂ (USNM); same except 3-VII-07, 1♀ (USNM); same except 26-VI-06, 2♂, 2♀ (USNM); same except Jessup, *Taxodium ditichum*, 2♀ (USNM); same except *Cupressus*, 29-IV-03, 1♂ (USNM). **Louisiana**: East Baton Rouge Parish, Baton Rouge, 22-X-1965, D.K. Pollet, 1♂ (LSAM); same except 21-VII-22, O.W. Rosewall, 1♂ (LSAM); St. Martin Parish, 4 miles S of Belle River, 20-VII-1995, D.A. Duerr II, 1♂ (LSAM); St. Tammany Parish, Covington, 28-V, H. Soltau, 1♀ (USNM). **Maryland**: Balto Co., Towson, 7-VII-81, J. Glaser, 1♂ (CMHN); Calvert Co., Sunderland, ex. oak, 1981, J. Glaser, 1♂ (CNMH); same except Battle Creek Cypress Swamp, 18-VIII-1987, A. & B. Norden & D. Williams, 1♂ (USNM); Montgomery Co., Plummer's Island, 30-VII-10, E.A. Schwarz, 1♂ (USNM); same except 25-VII, H.S. Barber, 2♀ (USNM). **Mississippi**: Hancock Co., 28-VIII, H. Soltau, 1♂ (USNM). **North Carolina**: Catawba Co., Hog Hill, black light trap, 20–27-VII-1976, R. Turnbow, 3♂ (FSCA); Cleveland Co., 7–19-VI-1970, at light, J.S. Ashe, 1♀ (TAMU); Dare Co., Killdevil Hills, 27-VII-1955, K.V. Krombein, 1♀ (USNM); same except 24-VII-1955, 1♀ (USNM); Tryon, *Pinus* reared, 3-X-06, W.F. Fiske, 3♂ (USNM); same except 20-VIII-07, 2♂, 1♀ (USNM);

same except 7-IV-06, 1♀ (USNM); same except 1-VII-05, 2♂, 1♀ (USNM); same except 8-VIII-05, 1♀ (USNM); same except 1-VIII-06, 1♂ (USNM); same except 20-VIII-07, 2♂ (USNM); same except 18-VI-06, 1♂ (USNM); same except 1-VIII-06, 1♀ (USNM). **Oklahoma**: Latimer Co., VII-85, K. Stephan, 1♀ (TAMU). **Pennsylvania**: York Co., 5 miles NW Davidsburg, black light, 23-VII-1971, P.J. Spangler, 1♂ (USNM). **Tennessee**: Giles Co., Pulaski, at light near farm, 8-VII-1946, 1♀ (USNM); Hardeman Co., Bolivar, emerged from *Cercis canadensis*, VII-1974, R.D. Ward, 3♂ (CMNH); same except 20–24-V-1974, 1♀ (CMNH); same except 4–11-VI-1974, 1♀ (CMNH); same except emerged 1-III-1975, 1♂ (CMNH); same except emerged 6-IV-1975, 27-III-1974, 3♂ (CMNH); same except emerged 8-III 1975, 27-XII-1974, 3♀ (CMNH); same except emerged 12-IV-1975, 27-III-1974, 4♂, 2♀ (CMNH). **Texas**: Chambers Co., I-10 at Trinity R., reared from *Taxodium distichum* collected 12-II-1993, emerged 28-IV-10-V-1993, D.J. Heffern, 2♂ (TAMU); same except emerged 11-V-31-V-1993, 1♂ (TAMU); Montgomery Co., Jones St. Forest, 8 miles S Conroe, Malaise trap, 21–27-VI-1987, R. Wharton, 1♂ (TAMU); same except The Woodlands, 20–26-VI-1977, J.E. Wappes, 1♀ (JEWC); Sabine Co., E Hemphill, "Beech Bottom", Malaise trap, 23-VI-2-VII-1989, R. Anderson & E. Morris, 1♂ (TAMU); same except 9 miles E Hemphill, flight intercept trap, beech-magnolia forest, "beech bottom", 25-VIII-10-IX-1989, 2♂ (TAMU); same except 6–16-VIII-1989, 1♂, 1♀ (TAMU); San Augustine Co., Piney Woods Conservation Center, 14 miles SE Broaddus, Malaise trap, 15–21-VII-1993, E.G. Riley, 1♂, 1♀ (TAMU); Tyler Co., Kirby State Forest, 30°34.30'N, 94°25.03'W, Lindgren funnel trap, 20-VII-24-VIII-2003, E.G. Riley, 2♂ (TAMU); same except 19-V-8-VI-2003, 1♀ (TAMU). **Virginia**: Cape Henry, 2-VI, J.N. Knull, 4♂, 2♀ (AMNH); same except *Pinus*, reared, A.D. Hopkins, 4♀ (USNM); Arlington Co., Arlington, 27-VI-1950, J.G. Franclemont, 1♀ (USNM); same except collected on suet cage, 2-VII-32, F.W. Poos, 1♀ (USNM); Essex Co., 1 mile SE Dunnsville, 37°52'N, 76°48'W, Malaise trap, 24-VI-9-VIII-1992, D.R. Smith, 2♀ (USNM); same except 14-VIII-2-IX-1993, 1♀ (USNM); Fairfax Co., Falls Church, *Acer rubrum*, reared, 28-VIII-16, F.C. Craighead, 1♂ (USNM); same except *Pinus*, reared, 3-VIII-14, H.B. Kirk, 1♂ (USNM); same except 21-VII-14, 3♂, 3♀ (USNM); Princess Anne Co., Virginia Beach, *Pinus*, reared, A.D. Hopkins, 1♂ (USNM).

Distribution.—Widely distributed in USA (Alabama, District of Columbia, Florida, Georgia, Illinois, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Pennsylvania, Tennessee, Texas, and Virginia) (Fig. 65).

Remarks.—*Curius dentatus* is widely distributed in USA (eastern, southeastern, and Great Plains) (Monné & Hovore 2005; Yanega 1996). Lacey *et al.* (2004) collected a series of female specimens in pheromone-baited traps in Illinois. Linsley & Chemsak (1997) listed the following host plants: *Acer* species (including *A. rubrum* L. (Aceraceae)), *Celtis* (Ulmaceae), *Cupressus* (Cupressaceae), *Juniperus* (Cupressaceae), *Pinus* (Pinaceae), and *Taxodium distichum* (Linnaeus) L.C. Rich (Cupressaceae). *Curius dentatus* is attracted to lights and has been collected in a variety of traps (Lindgren funnel, Malaise, flight intercept, and window) as well as reared from various hosts, including *Cercis canadensis* L. (Fabaceae) and *Liquidambar styraciflua* L. (Hamamelidaceae). This species is also associated with *Citrus madurensis* Lour. (Rutaceae) and other *Citrus* (Rutaceae) (M.C. Thomas, pers. comm.). Craighead (1923) described and illustrated the larva of *C. dentatus*. Fragoso (1978) illustrated the male and female genitalia of this species in his analysis of the tribal classification within the subfamily Cerambycinae. Lingafelter (2007) recently included *C. dentatus* in a key to cerambycids of eastern USA.

In Newman's (1840) description of this species he stated that the holotype ". . . is in the cabinet of the Entomological Club." Sharon Shute of the BMNH stated that the holotype was included in the material donated to the museum by the Entomological Club in 1844. The holotype is a female, 8.1 mm in length, and in poor condition: the apical segments of the antennae are absent, only the left metaleg is complete, the remaining legs have missing tarsi and the right foreleg is missing the tibia. The holotype bears the following labels: handwritten number 298 registration Ent. Club / [18]44–12, handwritten determination label in Newman's hand *Curius* Newm, / *dentatus* Newm; a second handwritten label: *Curius dentatus* Newman type in Arrow's handwriting (S. Shute, pers. comm.).

This species ranges in size from 5.0–10.0 mm in length. Male specimens examined measured: length 5.0–9.2 mm, width 1.0–2.1 mm (measured

across humeri); female specimens examined measured: length 5.0–10.0 mm; width 1.2–2.3 mm (measured across humeri).

Curius panamensis Bates
(Figs. 1e, 4a–c)

Curius panamensis Bates, 1885: 268.

Diagnosis.—This species is most closely related to *C. chemsaki* (Fig. 75) but can easily be distinguished from all congeners by the presence of the mesal spine on the third antennomere.

Redescription.—Male. Length 6.4–10.7 mm, width 1.2–2.0 mm (measured across humeri). Habitus as in Fig. 4a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head, antennal apices, pronotum, elytra, distal portions of femora and tibiae, and sternum ferrugineus.

Head with front nearly flat, transverse, head with a median, shallow groove from between eyes to just beyond vertex; head concave between antennal tubercles, which are strongly raised and separated by about the width of two antennal sockets; vertex granulose, with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, ovate-emarginate, with deep indentations around antennal insertions.

Antennae eleven-segmented, subcylindrical, almost twice as long as body; scape slightly bowed; about as long as fourth antennomere; third antennomere equal to or slightly shorter than fifth, almost twice as long as fourth, armed with acute mesal spine; fifth antennomere equal to or slightly longer than third. Scape and antennomeres 2–8 ciliate beneath with coarse, moderately long, suberect, hairs.

Pronotum subcylindrical, about 1.7 times as long as wide, evenly rounded at sides, widest at middle, slightly broader at apex than base, slightly constricted at basal third; disk convex; each side of pronotum with one long, suberect, pale hair anterolaterally. Surface opaque, granulate-punctate, with a dense field of gland pores (rounded, elevated tubercles with circular median impressions) (Fig. 4b); surface ornamented with ferrugineus markings as follows: a narrow, longitudinal, median vitta, extending from anterior margin to middle, where it is divided into two longitudinal vittae, which extend to the base, a thinner longitudinal sinuate vitta on each side. Lateral margins of pronotum ferrugineus.

Scutellum small, subquadrate, a little longer than broad, granulose, with short, recumbent, pale pubescence.

Elytra about 3 times as long as width at humeri, about 2.3 times as long as pronotal length, about 1.2 times broader basally than pronotum at widest (at middle); sides moderately sinuate around middle; elytral apices separately, narrowly rounded, forming a blunt point; epipleural margin moderately sinuate. Elytral disk nearly flat; base of each elytron slightly raised. Elytral surface opaque; with three irregularly shaped, broad, ferrugineus, lateral maculae arranged as follows: one at basal third, one at apical half, and one at apical third not quite reaching elytral apices. Elytral punctation nearly uniformly spaced, moderately dense, deep at basal third; punctures becoming shallower towards apex and sides, almost obsolete at apical third; each puncture with a short, recumbent, pale hair.

Venter with prosternum slightly shining, granulate-punctate, with raised nodules interspersed among a dense field of gland pores (rounded, elevated tubercles with circular median impressions) (Fig. 4b); prosternal process between procoxae nearly flat; narrowest area of prosternal process about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular; procoxal cavities open behind. Mesosternum surface shining, densely and finely punctate. Metasternum surface shining, densely and finely punctate, with scattered deeper punctures and a few long, suberect, pale hairs. Metepisternum clothed with short, recumbent, pale pubescence. Abdomen shining, clothed with short, recumbent, pale pubescence; abdomen densely and shallowly punctate; with a few long, suberect, pale hairs; fifth sternite broadly subtruncate, slightly shorter than preceding sternite.

Legs with femora gradually clavate; distal portion of femora and tibiae distinctly darker than base; meso- and metafemora slightly arcuate, weakly shining, clothed with recumbent, short, pale pubescence; underside of each femoral club with a small, acute triangular tooth with posterior edge weakly serrate, nearly smooth; metatibiae nearly straight, slightly sinuate (Fig. 4c); metatibiae clothed with fine, recumbent, pale pubescence, becoming longer distally; metalegs with

first tarsomere about twice as long or longer than second.

Female. Length 8.5–13.0 mm; width 1.7–2.7 mm (measured across humeri). Similar to male except pronotum not as elongate; pronotum and prosternum lacking gland pores; prosternum with sparse, shallow punctures each with a short hair (e.g. Fig. 2d). Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite.

Specimens examined.—**PANAMÁ: Panamá Province**: Canal Zone, Barro Colorado Island, 09°09'N, 79°51'W, 11-V-1997, Pickering-Windsor, 2♂ (JEWC); same except 29-I-1997, 1♂, 1♀ (JEWC, USNM); same except Altos de Pacora, 4–10-I-94, E. Giesbert, 2♀ (EFGC); same except J.E. Wappes, 1♀ (JEWC); same except Cerro Azul, 2200 ft., 4–9-I, 2♂, 1♀ (EFGC); same except vicinity Ft. San Lorenzo, 5-I-1983, 1♂, 3♀ (EFGC); same except 2-II-1983, 1♂ (EFGC); same except Cerro Azul, emerged 26-XII-1991, R. Turnbow, 1♂, 1♀ (RHTC); same except 20–30-I-1992, 1♀ (RHTC).

Distribution.—Known only from Chiriquí and Panamá Provinces, Panamá (Central America) (Fig. 65).

Remarks.—*Curius panamensis* is endemic to Panamá and nothing is known about the biology of this species. The holotype is deposited in the BMNH, the type locality is Panamá, Chiriquí: Tolé (Monné 2005).

Curius punctatus (Fisher)

(Figs. 1d, 5a–c)

Pentomacrus punctatus Fisher, 1932: 55.
Plectromerus punctatus: Giesbert, 1985: 80.
Curius punctatus: Nearns *et al.*, 2005: 172.

Diagnosis.—This species is similar to *C. dentatus* but is separated by the following characters: eyes ovate-emarginate (eyes nearly subreniform in *C. dentatus*); antennae more strongly flattened (slightly flattened in *C. dentatus*); and femora with knees distinctly darker (Fig. 5c) (femora with distal half distinctly darker in most specimens of *C. dentatus*).

Specimens examined.—*Type material:* Holotype ♂ (Fig. 5a), "**CUBA, Santiago de las Vegas**, Habana, E.E.A. de Cuba No. 9399, Sep. 7/30, Type No 43736 U.S.N.M." (USNM). Allotype ♀, "**CUBA, Santiago de las Vegas**, Habana, E.E.A. de Cuba, No. 9399, Nov.29/30, Allotype No 43736 U.S.N.M." (USNM).

Other material: **CUBA: Santiago de las Vegas Province**: Habana, Estacíon Experimental Agronómica de Santiago de Cuba, 29-XI-30, 1♂, 1♀ [paratypes] (AMNH, USNM); same except J. Acuña, 1♀ (IESC); same except 1 specimen [gender undetermined] (IESC). **Cienfuegos Province**: Minacarloza, 1-XII-27, Wilson, 1♀ (FSCA). **Sancti Spíritus Province**: Topes de Collantes, Casa de Visita FAME, luz, 5-VI-2002, R. Nuñez, 1♂ (ENPC); Sierra Maestra, Rio Yao, 25-X-41, J. Acuña, 1 specimen [gender undetermined] (IESC).

Distribution.—Known from Cienfuegos, Ciudad de la Habana, Granma, Sancti Spíritus, and Santiago de las Vegas Provinces, Cuba (Greater Antilles) (Fig. 65).

Remarks.—Male specimens examined: length 8.9–12.0 mm, width 2.0–2.7 mm (measured across humeri); female specimens examined: length 8.3–11.0 mm; width 2.0–2.5 mm (measured across humeri). This species is most closely related the *C. dentatus* (Fig. 75). Nearns *et al.* (2005) transferred this species to *Curius* from *Plectromerus*. Fisher (1932) stated that the eight specimens in the type series emerged from native (Cuban) wood but the host plant is not reported. Fisher (1932) also stated that this species is allied to *P. femoratus*, but it is clear that he never saw the type specimen of that large, distinct species (Fig. 16a). Piña *et al.* (2004) listed this species from the Trinidad Mountains, Cuba.

SYSTEMATICS OF PLECTROMERINI

Plectromerini Nearns & Branham, New Tribe

Type genus: *Plectromerus* Haldeman, 1847.

Diagnosis.—Plectromerini is superficially similar to Curiini but is easily distinguished by the third antennomere about as long or distinctly shorter than scape (third antennomere distinctly longer than scape in Curiini); and prosternal process between procoxae gradually or abruptly declivous (prosternal process between procoxae nearly flat, not gradually declivous in Curiini).

Description.—Form cylindrical, elongate. Head with front small, declivous; eyes coarsely or finely faceted; palpi somewhat unequal; mandibles small, acute; antennal tubercles not promi-

nent; antennae slender, finely punctate and pubescent; fifth antennomere about 1.5 times longer than third. Anterior coxae globose, prominent, cavities narrowly closed to open behind. Femora gradually to suddenly clavate, armed beneath with a small to large, acute tooth. Posterior edge of metafemoral tooth smooth to strongly serrate.

Remarks.—Results of a phylogenetic analysis suggest that Curiini, as traditionally defined, is a polyphyletic group (see Phylogenetic Analysis above). The new tribe Plectromerini Nearns & Branham is proposed and contains only the genus *Plectromerus*.

Checklist

Plectromerus Haldeman, 1847: 43.
- *Pentomacrus* White, 1855: 297.
- *Plectromerus* LeConte, 1873a: 304.
- *Curiosa* Micheli, 1983: 262. **New synonymy.**
  - ***acunai*** (Fisher, 1936: 344).
  - ***bidentatus*** Fisher, 1942: 16.
  - ***dentipes*** (Olivier, 1790: 268).
    - *dentatum* (J.E. LeConte, 1824: 172).
    - *scambus* (Newman, 1841: 79).
    - *costatus* Cazier & Lacey, 1952: 30. **New synonymy.**
  - ***dezayasi*** Nearns & Branham. **New species.**
  - ***distinctus*** (Cameron, 1910: 186).
    - *crenulatus* Cazier, 1952: 1. **New synonymy.**
  - ***dominicanus*** (Micheli, 1983: 262). **New combination.**
  - ***exis*** Zayas, 1975: 123.
  - ***fasciatus*** (Gahan, 1895: 109).
  - ***femoratus*** (Fabricius, 1792: 316).
    - *femoratus* (White, 1855: 297).
  - ***giesberti*** Nearns & Branham. **New species.**
  - † ***grimaldii*** Nearns & Branham, 2005: 19.
  - ***hovorei*** Nearns & Branham. **New species.**
  - ***josephi*** Nearns & Branham. **New species.**
  - ***lingafelteri*** Micheli & Nearns, 2005: 25.
  - ***michelii*** Nearns & Branham. **New species.**
  - ***morrisi*** Nearns & Branham. **New species.**
  - ***navassae*** Nearns & Steiner, 2006: 63.
  - ***ornatus*** Fisher, 1947: 34.
  - ***pinicola*** Zayas, 1975: 125.
  - ***pumilus*** Cazier & Lacey, 1952: 33.
  - ***ramosi*** Micheli & Nearns, 2005: 30.
  - ***serratus*** (Cameron, 1910: 185).
  - † ***tertiarius*** Vitali, 2004: 453.
  - ***thomasi*** Nearns & Branham. **New species.**
  - ***turnbowi*** Nearns & Branham. **New species.**
  - ***unidentatus*** Fisher, 1942: 17.
  - ***wappesi*** Giesbert, 1985: 81.

Genus *Plectromerus* Haldeman

Plectromerus Dejean, 1833: 332. *Nomen nudum.*

Plectromerus Haldeman, 1847: 43. Type species, *Obrium dentatum* J.E. LeConte, 1824 [= *Callidium dentipes* Olivier, 1790], by designation of Linsley (1963: 135). Attributed to Dejean.

Pentomacrus White, 1855: 297. Type species, *Saperda femorata* Fabricius, 1792, by monotypy.

Plectromerus LeConte, 1873a: 304. Type species, *Curius scambus* Newman, 1841, by monotypy. Preoccupied, junior homonym of *Plectromerus* Haldeman, 1847. Attributed to Dejean.

Curiosa Micheli, 1983: 262. Type species, *Curiosa dominicana* Micheli, 1983, by original designation. **NEW SYNONYMY.**

Diagnosis.—see diagnosis for tribe above.

Redescription.—see redescription for tribe above.

Distribution.—Bahamas, Central America, Greater Antilles, Lesser Antilles, Mexico, and USA (Figs. 66–72).

Remarks.—Results of our phylogenetic analysis suggest that the genus *Plectromerus* is supported by four unambiguous synapomorphies and is monophyletic with the monotypic genus *Curiosa* as a derived member of the *Plectromerus* clade (Fig. 75).

During the course of this revision, several taxonomic problems in the genus *Plectromerus* were identified: *P. distinctus* was revalidated by Micheli & Nearns (2005); *P. crenulatus* was found to be a junior synonym of *P. distinctus*; and *P. costatus* was found to be a junior synonym of *P. dentipes*. Our phylogenetic analysis (see above) suggests that *Curiosa dominicana* Micheli is a highly derived member of *Plectromerus* (Fig. 74). Therefore, a new combination, *Plectromerus dominicanus* (Micheli) is proposed, and the generic name *Curiosa* is synonymized with *Plectromerus*. In addition, 12 new species of *Plectromerus* were noticed among specimens borrowed from various entomological collections. Of these, four have been described during the course of this research: *P. lingafelteri*, *P. ramosi*, *Plectromerus grimaldii* †; and *P. navassae*. The remaining eight new species of *Plectromerus* are described herein.

Keys to the species of *Plectromerus* have been provided by several workers (Cameron 1910; Cazier & Lacey 1952; Vitali 2004; Vitali & Rezbanyai-Reser 2003). The following key treats all 27 presently known species of *Plectromerus* including eight new species described herein.

KEY TO SPECIES OF *PLECTROMERUS*

1. Antennae 10-segemented; scape is longest antennomere (Dominican Republic) ..... ***(P. dominicanus* (Micheli)** (Fig. 13a)
   Antennae 11-segmented; fifth or third antennomere is longest 2
2(1). Outer angles of elytral apices form acute spine (Fig. 50f) 3
   Outer angles of elytral apices variable (rounded, subtruncate, or truncate), not as above 4
3(2). Metafemora with two distinct teeth (Fig. 7b) (Dominican Republic). ..... ***P. bidentatus* Fisher** (Fig. 7a)
   Metafemora with one distinct tooth (Fig. 6c) (Cuba). ..... ***P. acunai* (Fisher)** (Fig. 6a)
4(2). Elytra with scattered, long, pale, erect or suberect setae throughout (e.g., Fig. 15a) 5
   Elytra without scattered, long, pale, erect or suberect setae throughout 10
5(4). Apical half of elytra and abdominal segments distinctly dark brown or black (Fig. 28a, d) (Navassa Island) ..... ***P. navassae* Nearns & Steiner** (Fig. 28a)
   Elytral and abdominal coloration variable, apical half of elytra and abdominal segments not distinctly dark brown or black 6
6(5). Metafemoral club gradually clavate (e.g., Fig. 59a); metafemoral teeth with posterior edge nearly smooth, weakly and shallowly serrate (e.g., Fig. 56b) 7
   Metafemoral club abruptly clavate (Fig. 59b); metafemoral teeth with posterior edge moderately to strongly serrate (e.g., Figs. 56c, d) 8
7(6). Metatibiae nearly straight (e.g., Fig. 60a); metatibiae nearly as long as metafemora (e.g., Fig. 61a) (Lesser Antilles) ..... ***P. fasciatus* Gahan** (Fig. 15a)
   Metatibiae slightly sinuate (Fig. 26b); metatibiae distinctly shorter than metafemora (e.g., Fig. 61c) (Cayman Islands) ..... ***P. michelii* Nearns & Branham, new species** (Fig. 26a)
8(6). Scape and metafemora usually without scattered, long, pale, erect setae; metafemoral teeth with posterior edge strongly, deeply serrate, with about 14–17 nearly uniform serration "peaks"; metatibiae strongly sinuate, about half as long a metafemora (Panamá) ... ***P. morrisi* Nearns & Branham, new species** (Fig. 27a)
   Scape and metafemora with or without scattered, long, pale, erect setae; metafemoral teeth with posterior edge moderately to strongly, deeply serrate, with about 10–12 irregular serration "peaks"; metatibiae moderately to strongly sinuate, more than half as long as metafemora 9
9(8). Metafemora with basal portion about as long as clavate (clubbed) portion; scape and metafemora without scattered, long, pale, erect or suberect setae (Dominican Republic) ... ***P. distinctus* (Cameron)** (Fig. 11a)
   Metafemora with basal portion distinctly shorter than clavate (clubbed) portion (Fig. 36c); scape and metafemora with scattered, long, pale, erect or suberect setae (southeastern Mexico, Jamaica, Honduras) ..... ***P. wappesi* Giesbert** (Fig. 36a)
10(4). Pronotal disk with single distinctly elevated tubercle medially (Fig. 14b) (Cuba, Dominican Republic, Jamaica) ..... ***P. exis* Zayas** (Fig. 14a)
   Pronotal disk without single distinctly elevated tubercle medially; if pronotum with median callus present, then accompanied by pair of submedial calli immediately posterior to center, and two submedial calli slightly anterior to center (e.g., Figs. 48b, c) 11
11(10). Integument usually dark reddish-brown (e.g., Fig. 24a); pronotal surface opaque, microsculptured; metafemoral teeth with posterior edge nearly smooth, weakly serrate; elytral maculation forming a distinct "X" pattern (e.g., Fig. 24a) (Dominican Republic) ..... ***P. lingafelteri* Micheli & Nearns** (Fig. 24a)
   Integument not dark reddish-brown; pronotal surface variable; metafemoral teeth with posterior edge variable; metafemoral teeth with posterior edge variable; elytral maculation variable; not with above combination of characters 12
12(11). Pronotum distinctly broader at base than apex (Fig. 33a); elytra about 3.5 times as long as pronotal length, about 1.7 times broader basally than pronotum at widest point; metafemora with basal portion distinctly longer than metafemoral club (Fig. 33c); metafemoral teeth with posterior edge nearly smooth (Haiti) ..... ***P. thomasi* Nearns & Branham, new species** (Fig. 33a)
   Pronotum not distinctly broader at base than apex; if elytra about 3.5 times as long as pronotal length, then elytra less than 1.7 times broader basally than pronotum at widest point (at base); length of metafemoral base variable; metafemoral teeth with posterior edge variable 13

13(12). Pronotal disk with only two distinct, small, round, dark, granulose maculae (Fig. 31a); metafe-moral teeth with posterior edge nearly smooth; prosternum in males without patch of coarse punctures in front of procoxae (Fig. 31c); small species (approx. 3–5 mm) (Bahamas, Cuba) ..... ***P. pumilus* Cazier & Lacey** (Fig. 31a)

Pronotal disk maculation variable, but without two distinct, small, round, dark, granulose maculae; metafemoral teeth with posterior edge variable; males with patch of coarse punctures in front of procoxae; size variable (approx. 5–17 mm) 14

14(13). Dorsal surface of scape with shallow to deep depression at base, depression approx. one third to one half length of scape (e.g., Figs. 38b, c) 15

Dorsal surface of scape simple, without depression at base 17

15(14). Large species (approx. 17 mm); dorsal surface of scape with deep depression at base (Fig. 16b); antennae about twice the body length in males; pronotal disk without moderately raised calli (e.g., Fig. 48a) (Jamaica) ..... ***P. femoratus* (Fabricius)** (Fig. 16a)

Small to medium-sized species (approx. 6–9 mm); dorsal surface of scape with shallow to moderately deep depression at base (Fig. 38b); antennae at most 1.5 times the body length in males; pronotal disk with one moderately raised, median callus, with two moderately raised, submedial calli slightly anterior to center, and two smaller slightly raised, submedial calli slightly posterior to center (e.g., Figs. 48b, c) 16

16(15). Elytral apices subtruncate (Fig. 50c); metasternum strongly shining, with moderately dense, deep punctures (Fig. 34c); metafemora unicolorous (Dominican Republic) ..... ***P. turnbowi* Nearns & Branham, new species** (Fig. 34a)

Elytral apices narrowly rounded (Fig. 23a); metasternum moderately shining, without moderately dense, deep punctures; metafemora with apical portion distinctly darker than basal portion (Dominican Republic) ..... ***P. josephi* Nearns & Branham, new species** (Fig. 23a)

17(14). Elytral apices strongly truncate (Fig. 50d), rarely subtruncate (e.g., Fig. 50c); metafemoral teeth large, with posterior edge moderately serrate; pronotum strongly shining; metasternum strongly shining, with sparse, shallow punctures (Bahamas, Cuba, USA) ..... ***P. dentipes* (Olivier)** (Fig. 9a)

Not with above combination of characters 18

18(17). Metafemoral teeth with posterior edge moderately to strongly serrate, with 10 or more distinct serration "peaks." 19

Metafemoral teeth with posterior edge nearly smooth, at most weakly serrate 23

19(18). Metafemoral teeth with posterior edge moderately serrate, with about 20–24 serration "peaks" (Guatemala) ..... ***P. giesberti* Nearns & Branham, new species** (Fig. 17a)

Metafemoral teeth with posterior edge moderately to strongly serrate, with about 10–14 serration "peaks. 20

20(19). Elytral apices broadly rounded; metafemoral teeth with posterior edge strongly, deeply serrate, with about 14 serration "peaks" of uneven height and distribution (Fig. 10c); metatibiae slightly sinuate, nearly straight; (Nicaragua) ..... ***P. dezayasi* Nearns & Branham, new species** (Fig. 10a)

Elytral apices variable; metafemoral teeth with posterior edge strongly, deeply serrate, with about 10–14 serration "peaks" of even height and distribution; metatibiae moderately to strongly sinuate 21

21(20). Elytral apices narrowly rounded; pronotal surface moderately shining, often with fine wrinkles, sparse to moderately densely, shallowly, moderately coarse punctation on disk (Puerto Rico, Virgin Islands) ..... ***P. ramosi* Micheli & Nearns** (Fig. 24d)

Elytral apices variable; if elytral apices narrowly rounded, then pronotal surface not moderately shining. 22

22(21). Elytral apices broadly rounded to subtruncate (Fig. 22a); elytra with two major macular regions: basal third of each elytron with a ferrugineus, oblique, narrow, macula beginning below humerus and reaching sutural midpoint; apical third of each elytron with a ferrugineus, arcuate-transverse, narrow macula (Costa Rica, Honduras) ..... ***P. hovorei* Nearns & Branham, new species** (Fig. 22a)

Elytral apices narrowly rounded (Fig. 50b); elytra usually uniformly testaceous, without distinct macular regions (Fig. 32a) (Dominican Republic) ..... ***P. serratus* (Cameron)** (Fig. 32a)

23(18). Metafemoral teeth large (e.g., Figs. 30c, 35b) 24

Metafemoral teeth small (e.g., Figs. 19c, 30c) 25

24(23) Mesosternum with deep punctures; metafemora suddenly clavate; metafemoral teeth with posterior edge weakly, irregularly serrate metafemoral teeth (Fig. 35b) (Jamaica) ..... ***P. unidentatus*** **Fisher** (Fig. 35a)
Mesosternum without deep punctures; metafemora gradually clavate; metafemoral teeth with posterior edge smooth, not serrate; (Cuba) ..... ***P. pinicola*** **Zayas** (Fig. 30a)

25(23) Small species (approx. 5 mm); pronotum with five to nine distinct, small, dark maculae (Fig. 29a) (Cuba). ..... ***P. ornatus*** **Fisher** (Fig. 29a)
Medium-sized species (approx. 6–8 mm); pronotum variable, but without five distinct, small, dark maculae 26

26(25) Elytral apices broadly rounded (fossil in Dominican amber) ..... ***P. tertiarius*** **Vitali** † (Fig. 18b)
Elytral apices subtruncate (fossil in Dominican amber) ..... ***P. grimaldii*** **Nearns & Branham** † (Fig. 18a)

Plectromerus acunai (Fisher)
(Figs. 6a–c)

Pentomacrus acuñai Fisher, 1936: 344.
Plectromerus acunai: Giesbert, 1985: 80.

Diagnosis.—This species most closely resembles *Plectromerus bidentatus* Fisher, 1942 but is easily distinguished by the metafemora armed with a single acute tooth (metafemora with two distinct acute teeth in *P. bidentatus*). From *P. dentipes*, this species is easily distinguished by the apex of each elytron armed with a strong, acute spine (elytral apices subtruncate to strongly truncate in *P. dentipes*).

Specimens examined.—Type material. Holotype ♀ (Fig. 6a), "**CUBA**, Loma del Gato, Sierra del Cobre, Oriente, July 4–7/36, J. Acuña, col., E.E.A. Cuba, Ento. No.10815, Type No. 51749 U.S.N.M." (USNM).

Other material. **CUBA**: **Cienfuegos Province**: Soledad, 16-XI-1927, Gavinas Wilson, 1♂, 1♀ (FSCA). **Sancti Spíritus Province**: Topes de Collantes, Casa de Visita FAME, luz, 30-IV-9-V-2002, Garcia, 1♀ (IESC); same except R. Nuñez, 1♂ (IESC). **Santiago de Cuba Province**: Cardero, Pico Turquino, X-1966, Garcia, 2♀ (IESC); same except Estacíon Experimental Agronómica de Santiago de Cuba, 3750 ft., 10–29-VI-36, J. Acuña, 1♂ [paratype] (IESC); 17 specimens [gender undetermined] (FDZC).

Distribution.—Known from Cienfuegos, Sancti Spíritus, and Santiago de Cuba Provinces, Cuba (Greater Antilles) (Fig. 72).

Remarks.—This species is endemic to Cuba. Zayas (1975) redescribed this species in his revision of the family Cerambycidae and stated that he had collected a series at the following localities: Sierra Cristal, Gran Piedra, Loma del Gato, Buenos Aires, and Topes de Collantes. Piña *et al.* (2004) listed this species from the Trinidad Mountains, Cuba. The holotype measures: length 8.7 mm, width 1.8 mm (measured across humeri).

Plectromerus bidentatus Fisher
(Figs. 7a–c)

Plectromerus bidentatus Fisher, 1942: 16.

Diagnosis.—The prosternal process between the procoxae is distinctive in this species, being abruptly declivous instead of gradually declivous and not expanded distally as in all other known *Plectromerus* species (Fig. 7c). *Plectromerus bidentatus* most closely resembles *P. dentipes* but is easily distinguished by the apex of each elytron armed with a strong, acute spine (elytral apices subtruncate to strongly truncate in *P. dentipes*). *Plectromerus bidentatus* and *P. acunai* both have the apex of each elytron armed with a strong, acute spine however, *P. bidentatus* is easily distinguished by the metafemora armed with a two distinct acute teeth (Fig. 7b) (metafemora with one acute tooth in *P. acunai*).

Specimens examined.—**DOMINICAN REPUBLIC: Duarte Province**: Reserva Loma, Quinta Espuela, Camelo, 13.2 km NNE San Francisco de Macorís, 19°24.46'N, 70°09.52'W, 515 m, edge of wet broadleaf forest, canopy trap, 6-IV-2004, C. Young, R. Davidson, J. Rawlins, 2♂, 3♀ (CMNH); same except 13.1 km NNE San Francisco de Macorís, 19°24.44'N, 70°09.47'W, 512 m, burned patch in broadleaf forest, canopy trap, 1♂ (CMNH); **La Vega Province**: Cordillera Central, 4.1 km SW El Convento, 18–50–38N, 70–42–51W, 1733 m, montane forest with pines near pasture, canopy trap, 31-V-2003, J. Rawlins, R. Davidson,

C. Young, C. Nuñez, P. Acevedo, 1♂ (CMNH); same except ca. 10 km E Constanza, 1295 m, 31-VIII-1988, beating in pine, guava forest, M.A. Ivie, T.K. Philips & K.A. Johnson, 1♂ (WIBF); **Monsenor Nouel Province**: Cabo Vito, 19°01.165'N, 70°31.197'W, beating, 4-VII-2004, C.J. Micheli, 1♂ (JAMC).

Distribution.—Known from Duarte, La Vega, and Monseñor Nouel Provinces, Dominican Republic (Greater Antilles) (Fig. 68).

Remarks.—This species is endemic to Hispaniola and has been collected beating vegetation and in canopy traps. Male specimens examined measured: length 6.2–8.5 mm, width 1.5–1.9 mm (measured across humeri); female specimens examined measured: length 7.8–8.1 mm; width 1.7–1.8 mm (measured across humeri).

The holotype (deposited in the MCZ) was not available for examination. The type locality is: Dominican Republic, Constanza: Loma de la Peña, northwest of Constanza, No. 23773 (Monné 2005).

Plectromerus dentipes (Olivier)
(Figs. 8a-b, 9a-c, 21e)

Callidium dentipes Olivier, 1790: 268.
Obrium dentatum J.E. LeConte, 1824: 172.
Plectromerus dentatus Dejean, 1833: 332. *Nomen nudum.*
Curius scambus Newman, 1841: 79.
Plectromerus scambus: LeConte, 1873a: 304.
Plectromerus dentipes: LeConte, 1873b: 189.
Plectromerus costatus Cazier & Lacey, 1952: 30. **NEW SYNONYMY.**

Diagnosis.—This species most closely resembles *P. acunai* and *P. bidentatus* but can easily be separated from both by the subtruncate to strongly truncate elytral apices (apex of each elytron armed with a strong, acute spine in *P. acunai* and *P. bidentatus*). In addition, the metafemora of *P. dentipes* are armed with a single acute tooth (metafemora armed with two distinct acute teeth in *P. bidentatus*).

Specimens examined.—*Type material: Curius scambus* Newman. Holotype ♂ [no label data] (BMNH).

Plectromerus costatus Cazier & Lacey. Holotype ♂ (Fig. 8a), "**BAHAMAS: South Bimini Island**, B.W.I., 25-V-1951, Cazier & Gertch" (AMNH).

Other material. **BAHAMAS: Andros Island**: San Andros, 22-VI-1976, J.W. Smith and F.D. Bennett, 1♂ (TAMU); Nicoll's Town, beating palmetto & slash, 6-VI-2001, M.C. Thomas, 1♂, 1♀ (FSCA); Bowen Sound, beating, 8-VI-2001, M.C. Thomas, 1♀ (FSCA). **Eleuthera Island**: Rainbow Bay, Malaise trap, XI-1986, D.B. & R.W. Wiley, 1♂, 1♀ (FSCA); same except 1-VII-1987, J.R. Wiley, 4♀ (FSCA); same except IX-15, Wickham collection, 1♀ (USNM). **Great Abaco Island**: Man-O-War Cay, near Abaco, 15–24-VIII-1971, H. & A. Howden, 2♂, 1♀ (WIBF). **New Providence Island**: Nassau, Gladstone Road, 24-XI-1959, A.M. Nadler, 2♂ (AMNH). **South Bimini Island**: VI-1951, M. Cazier, C. & P. Vaurie, 1♂, [paratype of *P. costatus*] (AMNH). **CUBA: Camagüey Province**: 19-VII-1923, J. Acuña, 2♂ (IESC); same except 1♂ (USNM); same except finca La Ciegas, vino a luz por noche 26–21-IX, J. Rutz, 1♀ (IESC); same except Loma la Llaga, Najasa, X-1964, Zayas, 1♂ (IESC); same except V-1964, 1♀ (IESC). **Holguín Province**: 1904, Sharp, 1♂ (WIBF); Cayamas, 1-VI, E.A. Schwarz, 1♂ (USNM); same except 10-I, 1♂ (USNM); same except 12-V, 1♂ (USNM); same except 10-VI, 2♂ (USNM); same except 6-VI, 1♀ (USNM); same except 14-II, 1♂ (AMNH); same except 29-V, 1♂, 2♀ (USNM); same except 23-V, 1♂, 1♀ (USNM). **Cienfuegos Province**: Soledad, 2-VI-1925, 1♂ (EMEC); same except V-1936, Darlington, 1♂ (USNM); same except Las Villas, Jardin Botanico, V-1986, Coralia Sanchez, 2♂ (FSCA, IESC). **Matanzas Province**: Ciénaga de Zapata, Playa Larga, 15-X-1999, Sergio Devesa, 1 specimen [gender undetermined] (SDPC); same except Las Villas, V-1963, Alayo-Garcia, 2♂, 1♀ (IESC). **Sancti Spíritus Province**: Estación Jarico, Banao, 15-III-2006, Sergio Devesa, 1 specimen, [gender undetermined] (SDPC). **Santiago De Cuba Province**: Florida Bianca, near Alto Songo, 23–24-V-1959, M.W. Sanderson, 1♀ (WIBF); same except Cuabitas, VII-1950, P. Alayao, 1♀ (IESC). **Villa Clara Province**: Cayo Canuco, Caibarien, L.V., II-1974, L.F. Armas, 1♂ (IESC); Port Moa, Smithsonian Parish Expedition, 8-II-1930, 1♂ (USNM); Oriente, Niguero Cabo Cruz, VI-1965, Zayas-Valdés, 1♀ (IESC); San Felipe, Arroyo Blanco, L.V., 10-IV-1975, L.F. Armas, 1♂ (IESC); Oriente, Tortuguilla, XII-1965, Zayas-Garcia, 1♂ (IESC). **USA: Alabama**: 16-V-1948, W. Rosenberg, 1♂ (USNM); same except 19-V-1949, 1♂, 1♀ (USNM); same except 6-V-1949, 1♀ (USNM); same except 14-V-1948, 1♀ (USNM); Baldwin Co., reared from pecan, 1971, 1♂ (JEWC); same except 1972, 1♂, 1♀ (JEWC, USNM). **California**: Orange Co.: Palos Verdes Peninsula, inside hotel restau-

rant, alive on tabletop, walking on butter, VII-1995, F.T. Hovore, 1♂ (FTHC). **Florida**: Alachua Co., Gainesville, at light, 14-V-1947, H.V. Weems, 1♂ (FSCA); same except 5-II-1947, 1♀ (FSCA); same except in window-pane trap with ethanol in hardwood hammock, 2-IX-77, T.H. Atkinson, 1♀ (USNM); same except Doyle Conner Building, light, 6-VIII-1990, P. Skelley, 1♂ (FSCA); same except NW 42nd Terrace (Frontalin + Turp. Lindgren Funnel), IX-2000, J.L. Foltz, 1♀ (ENPC); Bay Co., St. Andrews State Recreation Area, 13-V-1984, R. Turnbow, 1♂ (FSCA); Bradford Co., S of Keystone Heights, 13-X-1979, G.B. Edwards, 1♂ (FSCA); Brevard Co., Merritt Island, calamondin, 1-XII-81, F.A. Smith, 1♀ (FSCA); Broward Co., Hollywood, ex. *Citrofortunella microcarpa*, 4-V-1994, B. Coy, 1♀ (FSCA); same except Pampano, on *P. clausa*, 17-V-1937, D.R. Paulson, 2♂ (FSCA); same except Ft. Lauderdale, 26-IX-1962, 1♀ (FSCA); same except Hallandale, 1-VII-1962, B.K. Dozier, 1♂ (FSCA); Charlotte Co., Charlotte Harbor, Jackson trap, 11-IV-1991, S. Wilson, 1♀ (FSCA); Collier Co., Marco Island, 19-IV-12, 2♂, 2♀ (AMNH); same except from Sapodilla, 17-IV-12, Wm. T. Davis, 1♂, 2♀ (AMNH); Dade Co., 5-XI-1911, 1♀ (AMNH); same except F.F.D trap, 3-X-1988, D. Gruber, 1♂ (FSCA); same except Matheson Hammock, 15-XII-1978, E. Giesbert, 1♂ (EFGC); same except 16-XII-1978, 1♀ (EFGC); same except 15-II-57, D.R. Paulson, 1♀ (FSCA); same except 8-V-1990, E.G. Riely, 1♂ (TAMU); same except Jackson Trap, 16-IV-84, L.D. Howarton, 1♀ (FSCA); same except 15-XII-1961, B.K. Dozier, 1♀ (FSCA); same except 27-V-1963, 3♀ (FSCA); same except Virginia Key, 13-VI-1963, 8♂, 2♀ (EMEC); same except 1-VI-1963, 1♂ (FSCA); same except South Miami, in Cassia pod, 17-IV-45, 1♀ (USNM); same except Miami Beach, sticky board in *Terminalia catappa*, 16-XI-1989, W. Franchillon & D. Storch, 1♀ (FSCA); same except Camp Mahachee, 8-IV-1991, M.C. Thomas, 1♂ (FSCA); same except Miami, 26-III-49, O.D. Link, 1♀ (FSCA); same except Homestead, 12-VIII-1960, R.M. Baronowski, 1♂ (FSCA); same except Coral Gables, IV-57, from Jamaica, R.W. Swanson, 1♂ (FSCA); Dixie Co., 4 miles N Old Town, 18–20-V-1978, E. Giesbert, 1♂ (EFGC); Escambia Co., Santa Rosa Island, Ft. Pickens, 30°19.5′N, 87°17′W, MV UV light, 27–28-V-2003, A.K. & M.A. Tishechkin, 1♂ (LSAM); same except beating dead twigs, 28-V-2003, 1♂ (LSAM); Flagler Co., in window-pane trap with ethanol in slash pine plantation, 23-V-78, T.H. Atkinson, 1♀ (USNM); same except 22-VI-78, 1♀ (USNM); Franklin Co., Apalachicola, reared *Taxodium distichum*, X-05, W.F. Fiske, 1♀ (USNM); same except reared *Juniperus*, 19-VI-08, 1♂, 2♀ (USNM); same except reared, evergreen scrub oak, 1-VI-05, 1♂ (USNM); same except 8-V-05, 1♂ (USNM); Hernando Co., Withlacoochee State Forest, beating dead oak branches, Croom Motorcycle Area, near Brooksville, 26-VII-2003, E.H. Nearns, 2♂, 2♀ (ENPC); Highlands Co., Highlands Hammock State Park, 7-VII-94, R.F. Morris, 1♀ (USNM); same except Archbold Biological Station, 8 miles S of Lake Placid, blacklight trap, 7-VII-1988, P. Skelley, 1♂ (FSCA); same except UV light 1-X-1977, L.L. Lampert, 1♀ (FSCA); same except 18-X-1980, 1♂ (FSCA); same except 29-IX-1980, 1♂, 1♀ (FSCA); same except 20-IV-1976, 1♂, 1 (FSCA); same except 24-IX-1978, 1♂ (FSCA); same except 25-IX-1978, 1♂ (FSCA); same except 17-IX-1975, 1♂ (USNM); same except beating bushes, 30-VI-1988, P. Skelley, 1♀ (FSCA); same except insect flight trap, 14–18-IX-1978, H.V. Weems & Fred E. Lohrer, 1♀ (FSCA); same except Lake Placid, 13-VII-1948, B.T. McDermott, 1♀ (EMEC); Hillsborough Co., Tampa, 21-IV, Hubbard & Schwarz, 1♂ (USNM); Indian River Co., Sebastian, 10-II-1919, A. Wetmore, 1♂ (USNM); Jackson Co., at light, 4-VIII-54, F.W. Mead, 1♀ (FSCA); Jefferson Co., Aucilla Wildlife Management Area jct. hwys 59 & 98, 11-VI-1988, R. Turnbow, 2♂, 1♀ (FSCA); Lake Co., Mascotte, in Steiner Trap, 20-V-63, C.L. Felshaw, 2♀ (FSCA); Lee Co., Royal Palm Park, 9-IX-31, L. Bottimer, 1♀ (USNM); same except Fort Myers, 20-IV-12, 1♀ (AMNH); same except 3–5-V-08, Van Duzee Wickham, 1♂ (USNM); Levy Co., Sea Horse Key, at black light, 7-IX-57, H.A. Denmark, 4♀ (FSCA); same except at light, 9-IX-55, H.V. Weems, 1♂ (FSCA); Manatee Co., in Steiner Trap, 30-VI-64, D.C. Chancey, 2♀ (EMEC); same except Palmetto, on weed, 8-VI-45, 1♀ (USNM); same except 21-V-64, East Bradenton, D.C. Chancey and Frederick, 1♀ (EMEC); Monroe Co., Key Largo, beating hammock vegetation at night, 3-IV-66, H.V. Weems, 1♂ (FSCA); same except Key Largo, ex *Mastichodendron foetidissimum* (Jacq.) Cronquist, emerged 11–20-VIII-1979, R. Turnbow, 1♀ (FSCA); same except emerged 24–31-XII-1976, R. Turnbow, 1♀ (FSCA); same except ex brush pile, 23–24-III-1973, J.S. Ashe, 1♂ (TAMU); same except 23-III-1973, J.R. Ables, 3♂ (TAMU); same except UV light, 16-III-1972, J. Wappes, 1♀ (FSCA); same

except 22-III-1971, 1♀ (AMNH); same except 7-XII-66, R.E. Woodruff, 1♂ (FSCA); same except UV light, 18-III-1972, L.L. Lampert, 1♀ (FSCA); same except 2-V-57, F.W. Mead, 1♀ (FSCA); same except Upper Key Largo, 3–5-VI-1993, Androw, Brattain, Keeney & Morris, 1♂ (CMNH); same except 10-VI-1994, R. Morris, 1♀ (FSCA); same except 13–15-V-1979, E. Giesbert, 1♀ (EFGC); same except M.A. Cazier, 1♂ (AMNH); same except John Pennekamp State Park, 17-VI-1965, L. & C.W. O'Brien, 1♂ (EMEC); same except 18-III-1972, 1♂, 1♀ (JEWC); same except Long Key, Cotton Bloom, 11-XI-32, C.F. Rainwater, 1♀ (USNM); same except 24-VIII-70, 1♀ (TAMU); same except Cudjoe Key, in McPhail trap, 4-V-71, W.H. Pierce, 1♀ (FSCA); same except Flamingo, Florida Bay, 26-XI-1990, S. Thompson, 2♀ (CMNH); same except 6-VII-1961, Big Pine Key, lights, C.F. Harbison, 1♂ (EMEC); same except Big Pine Key, 1-V-1977, E. Giesbert, 1♂, 1♀ (EFGC); same except emerged 19-X-1977, 1♂ (EFGC); same except emerged I-1978, 1♀ (EFGC); same except Cactus Hammock, night beating, 15-V-1990, E.G. Riley, 1♂, 1♀ (TAMU); same except 5-V-1990, M.C. Thomas, 1♀ (FSCA); same except Watson's Nature Trail & vicinity, 14-V-1990: E. Riley, 1♂ (TAMU); same except Marathon, Point Crane Hammock, 5-V-1990, M.C. Thomas, 1♀ (FSCA); same except 10-VII-1971, 1♀ (AMNH); same except 24-V-1971, 1♀ (USNM); same except Knights Key, 1-XII-1970, 1♀ (USNM); same except 1-II-1971, 1♀ (JEWC); same except Sugarloaf Key, along CR 939, beating mangrove & buttonwood, 26-III-2005, Nearns & Leavengood, 1♂ (ENPC); same except Big Pine, ex *Rhacoma crossopetim*, 1919, Schwarz & Barber, 1♀ (USNM); same except 3 miles NE Tavernier, Plantation Key, 12-XII-1985, M.A. Ivie, 1♂ (WIBF); same except Key West, IV, Hubbard & Schwarz, 1♂ (USNM); same except Key West, 20-III-12, E.A. Schwarz, 1♂ (USNM); same except Fla. Keys, 3–5-IV-1953, E.L. Mockford, 2♂ (FSCA); same except Everglades, 9-IV-12, 1♀ (AMNH); same except Everglades National Park, Flamingo Prairie, 4-XII-1961, C.F. Harbison, 1♀ (EMEC); Okaloosa Co., Destin, in Steiner Trap, 10-V-62, G.W. Desin, 2♀ (FSCA); same except 16-V-60, R.E. Woodruff, 1♂, 2♀ (FSCA); Orange Co., Florida Fruit Fly Trap Survey, 28–29-V, H Clark, 1♂ (USNM); same except Orlando, bred from pecan, 15-V-08, Russell, 1♂ (USNM); same except 25-X-61, J.R. Woodley, 1♀ (FSCA); Oscelola Co., Kissimmee, 19-XI-61, R.E. Vild, 1♀ (FSCA); Palm Beach Co., Jupiter, 17-XII-38, F.E. Watson, L.J. Sanford, 1♀ (AMNH); same except Lake Worth, IV-1918, H. Klages, 1♂, 1♀ (CMNH); Pascoe Co., Holiday, 10-X-1993, W.H. Yackley, 1♀ (CMHN); Pinellas Co., St. Petersburg, calomondin, 10-VI-1982, K. Hickman, 1♂ (FSCA); same except in Steiner Trap, 10-XI-64, W.E. Wynn, 1♀ (EMEC); same except in Steiner Trap, 9-X-64, W.C. Carroll, 1♀ (FSCA); same except in McPhail trap, 12-XI-64, S.O. Storms, 1♂ (FSCA); same except Weedon Key, 7-IV-1995, W. Lu, 1♂ (ENPC); Polk Co., Babson Park, in Steiner Trap, 12-X-61, R.E. Vild, 1♂ (FSCA); Putnam Co., Crescent City, 24-IV-08, Van Duzee, 1♂ (AMNH); St. Johns Co., St. Augustine, C.W. Johnson, 1♂ (USNM); St. Lucie Co., St. Lucie, 20-IV, Hubbard & Schwarz, 1♂ (USNM); same except Fort Pierce, Jackson trap, 31-XII-80, E.W. Campbell, 1♀ (FSCA); Seminole Co., Sanford, 26-IV-08, Van Duzee, 1♀ (AMNH); same except Longwood, in Steiner Trap, 18-X-61, G.W. Desin, 1♀ (FSCA); Sumter Co., Center Hill, in Steiner Trap, 20-IV-65, E.W. Holder, 2♂, 1♀ (FSCA); same except Wildwood, in Steiner trap, 6-V-65, E.W. Holder, 1♂ (FSCA); Taylor Co., Williams Landing, 24–25-VII-1967, R. Smith, 1♂ (USNM); Volusia Co., 11-VIII-56, H.A. Denmark, 1♀ (FSCA); same except DeLand, 10-X-61, G.W. Desin, 1♀ (FSCA); same except Ormond Beach, in Steiner Trap, 3-XI-67, John N. Pott, 1♀ (FSCA); same except Orange City, in Steiner Trap, 9-X-61, G.W. Desin, 1♂ (FSCA). **Georgia**: Clinch Co., reared from pecan, VI-VII-1972, J. Wappes, 1♀ (JEWC); Greene Co., reared from pecan, V-1972, J. Wappes, 1♀ (JEWC); Glynn Co., Brunswick, *Cupressus*, 25-IV-03, W.F. Fiske, 1♂, 1♀ (USNM); Lowndes Co., VII-62, 1♂ (FSCA). **Louisiana**: Cameron Parish, Grand Chenier, dead limbs collected 11-III-82, reared from dead limbs, emerged 10–20-VIII-1982, E. Riley, 1♂, 1♀ (TAMU); same except emerged 9-V-1982, 1♂ (TAMU); East Baton Rouge Parish, 26-IX-1972, D.F. Andrews, 1♀ (LSAM); same except Baton Rouge, attrahent butyraldehyde, 18-VIII-28, CE Smith, 1♀ (LSAM); same except LSU Campus, hand collected at lights, 28-V-2001, A. Tishechkin, 1♀ (ENPC); same except near LSU campus, ex. *Quercus virginiana*, 31-VII-2003, D. Henne, 1♀ (ENPC); same except Baton Rouge, 6-VII-1982, R. Levy, 1♂ (LSAM); same except VI-1987, E.G. Riley, 1♀ (TAMU); same except reared from dead cypress, *T. disticum*, 1♀ (TAMU); same except col-

lected at light, 9–11-V-1986, D.A. Rider, 1♂, 1♀ (LSAM); Grant Parish, Boll Weevil Sex Attractant Trap, 23–3-V-1972, 1♂ (LSAM); Iberia Parish, New Iberia, 16-VI-45, H. Soltau, 1♂ (USNM); Latourche Parish, near Chackbay, 10-XI-2000, Sadie L. Granier, 1♀ (ENPC); Orleans Parish, New Orleans, in *Cercis canadensis*, 31-III-45, Rau, 1♂, 1♀ (USNM); same except 24-IX-1974, V.A. Brou, 1♂ (FSCA); Rapides Parish, 6-V-1973, Boll Weevil Sex Attractant Trap, 1♂, 1♀ (LSAM); St. Landry Parish, in soy beans, 18-V-1974, C.E. Eastmand, 1♂ (LSAM); same except 13-VI-1974, 1♀ (LSAM); same except 30-V-1974, 1♀ (LSAM); West Feliciana Parish, 5 miles E Hwy 61; cabin, MV light, 15-IX-2000, A.R. Cline, 1♂ (ENPC). **Texas**: Brazos Co., College Station, Riley Estate, 30°35.18'N, 96°15.12'W, emerged by IX-2003, ex. *Juniperus virginiana* limbs cut, IV-2001, E.G. Riley, 20♂, 29♀ (TAMU); same except emerged by 15-V-2002, 2♂, 1♀ (TAMU); same except Lick Creek Park, Malaise trap, 31-X-11-XI-1998, M. Yoder, G. Gorena, B. Rodriguez & I. Warriner, 1♀ (TAMU); same except 2–3-IX-1995, R.R. Garces, 2♀ (TAMU); same except 23–30-IX-1995, 1♀ (TAMU); Orange Co., Orange, 30°10.25'N, 93°45.36'W, 25-V-1997, E.G. Riley, 1♀ (TAMU).

Distribution.—Widely distributed in Bahamas (Great Abaco, Andros, Eleuthera, New Providence, and South Bimini Islands), Cuba (Camagüey, Cienfuegos, Guantánamo, Holguín, Santiago de Cuba, and Villa Clara Provinces), and USA (Alabama, Florida, Georgia, Louisiana, Texas) (Fig. 72).

Remarks.—This species is widely distributed in USA, Bahamas, and Cuba (Monné & Hovore 2005; Yanega 1996). A single specimen collected in California is believed to be introduced (F.T. Hovore, pers. comm.). Lingafelter (2007) recently included this species in a key to cerambycids of eastern USA. Zayas (1975) stated that *P. dentipes* is commonly collected throughout Cuba. Browne *et al.* (1993) and Thomas & Turnbow (2007) listed *P. dentipes* from Bahamas. Linsley & Chemsak (1997) listed the following host plants: *Carya illinoinensis* (Wangenh.) K. Koch (Juglandaceae), *Cercis canadensis* L. (Fabaceae), *Conocarpus erectus* L. (Combretaceae), *Crossopetalum rhacoma* Crantz (Celastraceae), *Lysiloma latisiliquum* (Linnaeus) Benth. (Fabaceae), *Metopium toxiferum* (Linnaeus) Krug & Urban (Anacardiaceae), and *Quercus* (Fagaceae). *Plectromerus dentipes* is attracted to lights and has been collected in a variety of traps (boll weevil sex attractant trap, Jackson trap, flight intercept, FFD, Lindgren funnel, McPhail trap, Steiner trap, traps baited with attrahent Butyraldehyde, and traps baited with "frontalin + turp"), and associated with various plants (*Citrus madurensis* Lour. (Rutaceae), *Clusia rosea* Jacq. (Clusiaceae), *Cupressus* (Cupressaceae), *Juniperus virginiana* L. (Cupressaceae), *Avicennia* (Verbenaceae), *Sideroxylon foetidissimum* Jacq. (Sapotaceae), *Pinus clausa* (Chapman ex Engelm.) Vasey ex Sarg. (Pinaceae), *Manilkara zapota* (L.) van Royen (Sapotaceae), sticky board in *Terminalia catappa* L. (Combretaceae), and *Taxodium distichum* (L.) L.C. Rich. (Cupressaceae). Ree (2003) list this species as attacking pecan (*Carya illinoensis* (Wangenh.) K. Koch (Juglandaceae)).

Plectromerus dentipes ranges in size from 4.3 mm-9.0 mm in length. Male specimens examined measured: length 4.3–8.7 mm, width 1.0–2.2 mm (measured across humeri); female specimens examined measured: length 4.5–9.0 mm; width 1.0–2.1 mm (measured across humeri).

The depository of type material of *Callidium dentipes* Olivier is unknown (Monné 2005) and therefore, types were unavailable for study. The type locality is listed as USA: Georgia (Monné 2005). *Plectromerus dentipes* is the only *Plectromerus* species recorded from USA and the identity of this species is not in question. Article 75.2 of the ICZN (1999) states "a neotype is not to be designated as an end in itself, or as a matter of curatorial routine, and any such neotype designation is invalid." Therefore, a neotype designation is not warranted.

Cazier & Lacey (1952) described *Plectromerus costatus* and stated that it was most closely related to *Plectromerus dentipes* but could be separated from it ". . . by the much larger and more densely placed punctures on the pronotal disk and by the non-serrate, or but slightly serrate, posterior margin of the femoral spine" (Cazier & Lacey 1952: 32). After careful examination of the holotype of *P. costatus* (Fig. 8a) and approximately 400 specimens of *P. dentipes* from USA, Bahamas, and Cuba, the characters mentioned by Cazier & Lacey (1952) were found to be variable in *P. dentipes*. In *P. dentipes*, metafemoral tooth serration ranges from slightly serrate to moderately serrate. The size and density of pronotal punctation in *P. dentipes* is also variable, suggesting one species instead of two (Fig. 8b). We believe these two taxa are conspecific.

***Plectromerus dezayasi* Nearns & Branham, new species**
(Figs. 10a-c)

Diagnosis.—From congeners, *P. dezayasi* is distinguished by the combination of the following characters: intricate elytral pattern; pronotal disk with moderately raised calli; fifth antennomere almost 4 times longer than fourth and about 1.5 times longer than third; and strongly, deeply serrate metafemoral teeth. *Plectromerus exis* (Figs. 14a-c), *P. josephi* new species (Figs. 23a-c), and *P. lingafelteri* (Figs. 24a–c) also have rather intricate elytral patterns, however, *P. exis* can easily be distinguished by the distinct tubercle in the center of the pronotum (Fig. 14b) and weakly serrate (almost smooth) metafemoral teeth in both *P. josephi* new species and *P. lingafelteri*.

Description.—Male. Length 9.9 mm, width 2.2 mm (measured across humeri). Habitus as in Fig. 10a. General form small, narrow, subcylindrical. Integument testaceous, with head, basal antennomeres, portions of pronotum, venter, and femoral apices ferrugineus; each elytron testaceous with three major macular regions as follows: (1) basal third with a ferrugineus, oblique, narrow, irregular macula beginning below humerus and reaching sutural midpoint; (2) a ferrugineus, oblique, narrow, irregular macula from sutural midpoint to about apical third, not reaching margin; and (3) apical third testaceous, with broader, ferrugineus, oblique, irregular macula from just below apical third to about below suture midpoint.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head slightly concave between antennal tubercles, which are slightly raised and separated by about the width of two antennal sockets; vertex microsculptured, with dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere about as long as scape, about twice as long as fourth; fifth antennomere longest, almost 4 times longer than fourth, about 1.5 times longer than third; antennomeres 6–10 becoming progressively shorter; eleventh slightly longer than tenth; basal antennomeres subcylindrical, from fifth moderately flattened; apices of antennomeres 5–10 produced externally. Scape with short, recumbent, pale pubescence; antennomeres 2–8 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides broadly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin moderately arcuate; disk convex, slightly flattened, with one moderately raised, median callus at about the center; disk with two moderately raised, submedial calli slightly anterior to center, and two moderately raised, submedial calli slightly posterior to center; lateral margins of pronotum with patch of coarse, deep punctures, and two long, suberect setae anterolaterally. Basal third of disk with two long, pale, recumbent setae positioned submedially, arising from deep punctures. Surface microsculptured, with dense, shallow punctures.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 3 times as long as width at humeri, about 3.3 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); sides nearly parallel, slightly sinuate around middle, somewhat evenly rounded to apex; elytral apices individually, broadly rounded; epipleural margin strongly sinuate. Elytral disk moderately concave medially, subsuturally, creating a distinct costa on each elytron; base of each elytron moderately raised. Elytral surface strongly shining; elytral punctation moderately dense, coarse, and deep at basal third; punctures becoming more shallow toward apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with portions of prosternum strongly shining; one irregular patch of coarse, deep punctures front of and spanning the width of the procoxae; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.3 times the width of apex of process which is subtriangular with rounded corners (Fig. 10b); prosternal process between procoxae gradually declivous; procoxal cavities open behind. Mesosternum surface shining, sparsely and shallowly punctate. Metasternum surface shining, sparsely and finely punctate, with scattered deeper punctures and sparse suberect, pale hairs interspersed. Metepisternum

sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen shining; finely, shallowly punctate; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, slightly shorter than preceding sternite.

Legs with femora pedunculate-clavate; basal portion of metafemora slightly shorter than metafemoral club; meso- and metafemora slightly arcuate, shining, clothed with moderately densely, recumbent, short, pale pubescence; clavate portion darker than base; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge strongly, deeply serrate, with about 14 serration "peaks" of uneven height and distribution, each peak with a short, curved, pale hair; metatibiae slightly sinuate, nearly straight, slightly flattened, about 0.8 times as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 10c).

Etymology.—This species is named in memory of the late Fernando de Zayas (1912–1983), for his many contributions to the study of the Cuban cerambycid fauna. Fernando was an entomologist at the Cuban Academy of Sciences and a prolific collector of Coleoptera. The Zayas collection remains the most complete representation of Cuban cerambycids known (Nearns 2006). The epithet is a noun in apposition.

Specimens examined.—*Type material:* Holotype ♂ (Fig. 10a), "**NICARAGUA**, El. 1400m, Cerro Chimborazo, 13°02'N, 85°56'W, 20 Nov. 71, Stockwell, beating dead branches" (EMEC).

Distribution.—Known only from Jinotega Department, Nicaragua (Central America) (Fig. 66).

Remarks.—This species is described from a single male specimen, collected beating dead branches at 1400 m elevation. The holotype described herein represents the only known specimen and nothing is known about the biology of this species.

***Plectromerus distinctus* (Cameron)**
(Figs. 8d, 11a–c, 21a, 21c, 28b, 28h)

Pentomacrus distinctus Cameron, 1910: 186.
Plectromerus distinctus: Giesbert, 1985: 80.
Plectromerus crenulatus Cazier, 1952: 1. **NEW SYNONYMY.**

Diagnosis.—*Plectromerus distinctus* is one of the smallest species in the genus, ranging in length from 4.0–6.7 mm. From congeners, *P. distinctus* is distinguished by the combination of the following characters: elytra with scattered long, suberect setae; pronotal disk granulose; and metafemoral teeth moderately to strongly, deeply serrate. This species is similar to *P. wappesi* but is distinguished by the granulose pronotal disk (pronotal disk with dense, round, shallow punctures in *P. wappesi*).

Redescription.—Male. Length 4.0–6.0 mm, width 0.9–1.3 mm (measured across humeri). Habitus as in Fig. 11a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head and pronotum ferrugineus; each elytron testaceous with two vaguely defined macular regions as follows: (1) basal third with one narrow, transverse to slightly oblique, ferrugineus, macula not reaching epipleural margins, and (2) apical third with one broader, subcircular, ferrugineus, macula not reaching epipleural margins.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head slightly concave between antennal tubercles, which are separated by about the width of two antennal sockets; vertex with dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, about as long as body; scape bowed; third antennomere equal to or slightly shorter than scape, a little longer than fourth; fifth antennomere longest, about twice as long as fourth, slightly longer than scape; basal antennomeres subcylindrical, from fifth slightly flattened, from sixth progressively shorter; apices of antennomeres 5–8 slightly produced externally. Scape with short, pale, recumbent pubescence, rarely with long, suberect setae; antennomeres 2–6 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.5 times as long as wide, widest at middle, slightly wider at apex than base; pronotal sides slightly inflated, nearly parallel, slightly constricted at basal third, with a slight inflation just before apex; basal margin slightly arcuate; disk convex; lateral margins of pronotum with patch of coarse, deep punctures, with one long, recumbent seta anterolaterally. Surface with portions microsculptured, mod-

erately shining; disk with granulose punctures (e.g. Fig. 11b); basal third of disk with two long, pale, recumbent setae positioned submedially, arising from deep punctures.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, about 2.8 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); sides nearly parallel, slightly sinuate, evenly rounded to apex; elytral apices individually, broadly rounded to nearly subtruncate; epipleural margin slightly sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each slightly raised. Elytral surface strongly shining; elytral punctation moderately dense, rather evenly spaced, deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; punctures each with a short, fine, pale, recumbent hair, with sparse to dense scattered long, suberect setae (each about as long as scape).

Venter with prosternum strongly shining; one irregular patch of coarse, deep punctures in front of each procoxa; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind. Mesosternum surface strongly shining, sparsely punctate with coarse, shallow punctures. Metasternum surface strongly shining, with sparse, fine punctures, with a few suberect, pale hairs interspersed. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining; finely, shallowly punctate; with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly rounded, slightly longer than preceding sternite.

Legs with femora pedunculate-clavate; metafemoral club slightly longer than basal portion; meso- and metafemora slightly arcuate, shining, clothed with sparse, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge moderately to strongly, deeply serrate, with about 10 irregular serration "peaks"; each peak with a short, curved, pale hair; metatibiae strongly sinuate; metatibiae slightly flattened, about 0.7 times long as metafemora, gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (e.g. Fig. 11c).

Female. Length 4.1–6.7 mm; width 0.9–1.5 mm (measured across humeri). Similar to male except pronotal sides lacking coarse punctures and prosternum lacking irregular patch of punctures in front of each procoxa. Abdomen with terminal sternite evenly, broadly rounded, about 1.5 times longer than preceding sternite.

Specimens examined.—*Type material: Pentomacrus distinctus* Cameron. Holotype ♀ (Fig. 11a), "**HAITI**, Dr. Cameron" (BMNH).

Plectromerus crenulatus Cazier. Holotype ♀, "**HAITI**, about 60 ft. alt. F. 4629 L., Manville, Feb. 6.10.1922" (AMNH).

Other material. **DOMINICAN REPUBLIC: Barahona Province**: 4.5 km S Barahona, 17-V-1992, R. Turnbow, 2♂, 8♀ (RFTC); same except 22-V-1992, 6♂, 2♀ (RFTC); same except M.C. Thomas, 5♂, 1♀ (FSCA); same except 16-V-1992, R. Turnbow, 1♀ (RFTC); same except 13-VII-1996, 1♂, 1♀ (RFTC); same except Punta Prieta, 13-VII-1996, 1♂ (RFTC); same except hill above Barahona, beating at night, 75 m, 19-VII-1999, M.A. Ivie, 1♀ (WIBF); same except E of Cachon, Hotel Oasis, at light, 18°14.029'N, 71°08.379'W, 26-VII-1999, M.A. Ivie & K.A. Guerrero, 2♂, 2♀ (WIBF); same except 5 km SE Polo, slopes of Loma la Torre, 18°03'N, 71°16'W, 980 m, disturbed forest with coffee, Carnegie Museum Specimen Number CMNH-239,093, 18-VI-1992, C. Young, R. Davidson, S. Thompson, J. Rawlins, 1♂ (CMNH); same except 32 km S Barahona, near coast, 29-VIII-1988, on dead logs, M.A. Ivie, T.K. Philips & K.A. Johnson, 1♀ (WIBF). **La Altagracia Province**: Parque Nacional del Este, Boca de Yuma entrance, 18°21.904'N, 68°37.087'W, beating vegetation, at night, 5-VIII-1999, M.A. Ivie, 2♂, 1♀ (WIBF); same except 6-VIII-1999, 12 m, 18°21.904'N, 68°37.094'W, 1♂ (WIBF); same except 2 m, at light, M.A. Ivie & K.A. Guerrero, 1♂ (WIBF); same except Boca de Yuma, 3–20 meters, beating, 27-VI-2005, Nearns & Lingafelter, 1 specimen [gender undetermined] (ENPC); same except Punta Cana near Ecological Reserve, 0–5 meters, beating, 12-VI-2005, Nearns & Lingafelter, 5 specimens [gender undetermined] (ENPC), same except 5 km W La Laguna Nisibon, citrus, 17-VI-98, R.E. Woodruff, 1♂ (REWC). **Monte Cristi Province**: 13 km N Villa Elisa, 31-V-1994, M.C. Thomas, 1♂ (FSCA). **Pedernales Province**: 14.5 km N Cabo

Rojo, 165 m., 18°03'N, 71°39'W, arid thornscrub, 26–27-IX-1991, C. Young, S. Thompson, R. Davidson, J. Rawlins, 1♂ (CMNH); same except 19-VI-1990, J. Rawlins, C. Young, S. Thompson, 1♀ (CMNH); same except 26 km N Cabo Rojo, 18°06'N, 71°38'W, 730 m, 13-VII-1990, 1♂ (CMNH); same except Cabo Rojo, "Alcoa" headquarters, blacklight trap, 10-VI-1998, R.E. Woodruff, P.H. Freytag, 1♀ (REWC); same except 25.5 km N Cabo Rojo, 21-V-1992, R. Turnbow, 1♀ (RFTC); same except 24 km N Cabo Rojo, 610 m, wet forest at light & night beating, 21-VIII-1988, M. Ivie, Philips & Johnson, 2♀ (WIBF); same except 3000 ft., blacklight trap, 2-VII-98, R.E. Woodruff & R.M. Baranowski, 1♀ (REWC); same except 26 km N Cabo Rojo, 760 m, 17-VI-1987, J. Rawlins, R. Davidson, 1♀ (CMNH); same except along Rio Mulito, 13 km N Pedernales, 18°09'N, 71°46'W, 230 m, riparian woodland, 17-VI-1992, J. Rawlins, S. Thompson, C. Young, R. Davidson, 1♂ (CMNH); same except P.N. Sierra de Baoruco, Las Abejas, 1240 m, 18°09.023'N, 71°37.387'W, 9-VIII-1999, M.A. Ivie, 1♀ (WIBF); same except Sierra de Baoruco, Aceitillar, 25.2 km ENE Pedernales, 18°05.29'N, 71°31.16'W, 1272 m, dense broadleaf forest, pine, UV light, sample 42212, 14-VI-2003, C. Young, J. Rawlins, C. Nuñez, R. Davidson, P. Acevedo, M. de la Cruz, 1♀ (CMNH); same except Parque Nacional Jaragua, trail to Carlitos ca. 6 km S of Hwy 44, 106 meters, blacklight, 17°48.932'N, 71°28.271'W, 8-VII-2004, Perez, Lingafelter, 1♂ (USNM). **Peravia Province:** 2 km N Nizao, Aug. 5, 1979, G.B. Marshall, 1♂ (JAMC). **Puerto Plata Province**, 14 km W Puerto Plata, 11-V-1985, J.E. Wappes, 1♀ (USNM). **San Pedro de Macorís Province**: 13 km E Boca Chica, 27-V-1992, M.C. Thomas, 1♀ (FSCA); same except R. Turnbow, 2♀ (RFTC); same except 15-V-1992, M.C. Thomas, 1♂ (FSCA); same except 4 km, E Tintero, 15-V-1992, 1♀ (FSCA); same except R. Turnbow, 2♂ (RFTC); same except near Juan Dolio, 13–18-V-1985, J.E. Wappes, 1♂, 3♀ (JEWC); same except 12 km W San Pedro de Macorís, 5–19-V-1985, E. Giesbert, 3♂, 2♀ (EFGC).

Distribution.—Known from Haiti and Dominican Republic (Barahona, La Altagracia, Monte Cristi, Pedernales, Puerto Plata, and San Pedro de Macorís Provinces) (Greater Antilles) (Fig. 70).

Remarks.—This species is endemic to Hispaniola and has been collected at UV light and beating vegetation.

Vitali & Rezbanyai-Reser (2003) synonymized *P. crenulatus* and *P. distinctus* with *P. serratus* without comparing type specimens. Micheli & Nearns (2005) restored *P. distinctus* from synonymy. The type specimens of *P. crenulatus* (Fig. 8c) and *P. serratus* (Fig. 32a) were examined carefully and differences between them suggest two species instead of one. The two species are similar but are distinguished by the following characters: *P. crenulatus* has long, suberect hairs on the elytra and granulose punctures on the pronotum, whereas *P. serratus* lacks the hairs and granules and has microsculpturing on the pronotum.

In addition, the type specimens of *P. crenulatus* (Fig. 8c) and *P. distinctus* (Fig. 8d) were carefully examined and *P. crenulatus* was found to be a junior synonym of *P. distinctus*. Both type specimens are females, collected in Haiti, and have long, suberect setae on the elytra, granulose punctures on the pronotum, similar metafemoral serrations, and metatibial curvature. Based on these characters, we think these two taxa are conspecific and we synonymize *P. crenulatus* herein.

***Plectromerus dominicanus* (Micheli)**
(Figs. 12, 13a–d)

Curiosa dominicana Micheli, 1983: 262.
Plectromerus dominicanus, **NEW COMBINATION.**

Diagnosis.—The combination of the following characters make this the most distinctive species in the genus: antennae with 10 segments, scape distinctly longest antennomere, finely-faceted eyes, and each elytron ornamented with a small, yellowish marking.

Specimens examined.—*Type material:* Holotype ♀ (Fig. 13a), "**DOMINICAN REPUBLIC: La Vega**: 20 km. SE. Constanza, 26-V-1978, C.W. & L.B. O'Brien & Marshall" (USNM).

Other material. **DOMINICAN REPUBLIC: La Vega Province**: Pico Duarte Trail, 8000 ft., below La Comparticíon, beating vegetation, 19°02.254'N, 70°58.155'W, 1-VII-2004, S.W. Lingafelter, 1♀ (USNM); same except trail from La Comparticíon-La Pelona, P.N.A. Bermudez, 2450–3070 m, 18-VII-2002, D. Perez, B. Hierro, R. Bastardo, 1 specimen [gender undetermined] (MCZWeb 2007).

Distribution.—Known only from La Vega Province, Dominican Republic (Greater Antilles) (Fig. 70).

Remarks.—Micheli (1983) described *Curiosa dominicana* from a single female specimen, noting that it presented unusual characters for a curiine.

Indeed, *C. dominicana* possesses several autapomorphies which are unique within the tribe, such as antennae with 10 segments (11 segments in *Curius* and *Plectromerus*), scape distinctly longest antennomere (third or fifth distinctly longer than scape in *Curius*, fifth distinctly longer than scape in *Plectromerus*), finely-faceted eyes (coarsely-faceted in *Curius* and *Plectromerus*), and each elytron ornamented with a small, yellowish marking (absent in *Curius* and *Plectromerus*). However, phylogenetic analysis of Curiini suggests that *C. dominicana* is a highly derived *Plectromerus* (Fig. 75). Based on this analysis, a new combination, *Plectromerus dominicanus* (Micheli) is proposed.

Plectromerus dominicanus is endemic to Hispaniola and is known only from three specimens, all collected at high altitude in the Cordillera Central region of the Dominican Republic. Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype. This species has been collected beating dead *Pinus occidentalis* Swartz (Pinaceae) branches (S.W. Lingafelter, pers. comm.). The finely-faceted eyes of this species suggest that it may be diurnal. All other known *Curius* and *Plectromerus* species have coarsely-faceted eyes and are thought to be nocturnal.

Plectromerus exis Zayas
(Figs. 14a–c, 21f)

Plectromerus exis Zayas, 1975: 123.

Diagnosis.—This species is easily distinguished from all other presently known congeners by the distinctly elongate pronotal dimensions and single elevated tubercle on the pronotal disk (Fig. 14b).

Redescription.—Male. Length 6.7–8.2 mm, width 1.3–1.5 mm (measured across humeri). Habitus as in Fig. 14a. General form small, narrow, subcylindrical. Integument testaceous, with head, apices of antennomeres 3–11, portions of pronotum, elytra, and femoral apices ferrugineus.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head concave between antennal tubercles, which are slightly to moderately raised and separated by about the width of two antennal sockets; vertex microsculptured, with dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with deep indentations around antennal insertions.

Antennae eleven segmented, antennomere 8 surpassing elytral apices; scape bowed; third antennomere slightly longer than scape, about twice as long as fourth; fifth antennomere longest, slightly longer than width of elytra at humeri, about 3 times longer than fourth, about 1.5 times longer than third; antennomeres 6–10 becoming progressively shorter; eleventh slightly longer than tenth; basal antennomeres subcylindrical, from fifth slightly flattened. Scape with short, recumbent, pale pubescence; antennomeres 2–7 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.8 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides nearly parallel, arcuately constricted at basal third, with a slight inflation just before apex; basal margin slightly arcuate; disk convex, with one strongly raised, median tubercle (Fig. 14b); lateral margins of pronotum with two long, suberect setae anterolaterally. Surface strongly microsculptured, with scattered, shallow punctures; surface ornamented with a narrow, longitudinal, irregular, ferrugineus vitta on either side of median tubercle; median tubercle ferrugineus.

Scutellum small, rounded, distinctly longer than broad, impunctate.

Elytra about 3 times as long as width at humeri, about 2.5 times as long as pronotal length, about 1.5 times broader basally than pronotum at widest point (at middle); elytral sides strongly sinuate around middle; elytral apices individually, broadly rounded; epipleural margin moderately sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each elytron moderately raised. Elytral surface microsculptured, with portions glabrous and strongly shining; punctation moderately dense, coarse, and deep at basal third; punctures becoming more shallow toward apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with prosternum strongly shining, with moderately dense, fine punctures; narrowest area of prosternal process between procoxae about 0.1 times as wide as procoxal cavity, and about 0.3 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal

cavities open behind. Mesosternum surface strongly shining, sparsely and finely punctate. Metasternum surface strongly shining, sparsely and finely punctate, with scattered deeper punctures and sparse suberect, pale hairs interspersed. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen shining; finely, shallowly punctate; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, slightly longer than preceding sternite.

Legs with femora pedunculate-clavate; basal portion of metafemora distinctly longer than metafemoral club; meso- and metafemora slightly arcuate, shining, clothed with moderately densely, recumbent, short, pale pubescence; clavate portion darker than base; underside of each femoral club with a small, acute triangular tooth; metafemoral teeth with posterior edge nearly smooth, weakly serrate; metatibiae slightly sinuate, nearly straight, slightly flattened, about 0.7 times as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 14c); metalegs with first tarsomere about twice as long or longer than second.

Specimens examined.—*Type material:* Holotype ♂, "**CUBA, Oriente**, col. F. de Zayas, Loma del Gato, 6–1959" (FDZC).

Other material: **CUBA: Granma Province**: Sierra Maestra, Turquino, VIII-1964, F. de Zayas, 1♂ (FDZC); same except Oriente, Pico Turquino, VI-1964, Zayas-Gracia, 1♂ (IESC); same except Oriente, Jiguaní, F. de Zayas, 1 specimen, [gender undetermined] (FDZC). **Holguin Province**: Oriente, Sierra Cristal, VI-1959, F. de Zayas, 2 specimens [gender undetermined] (FDZC). **Pinar Del Rio Province**: P. Guijaibón, V-1953, 1♂ (FDZC). **DOMINICAN REPUBLIC: Pedernales Province**: 25.5 km, N Cabo Rojo, 20-V-1992, R. Turnbow, 1♂ (RHTC). **Dajabón Province**: 13 km S Loma de Cabrera, 27-V-1978, O'Briens & Marshall, 1♂ (JAMC). **JAMAICA: Manchester Parish**: Mandeville, 13-IV-1937, 2000 ft, C. Roys, 1♀ (MNRJ).

Distribution.—Known from Cuba (Granma, Holguin, Pinar del Rio, and Santiago de Cuba Provinces), Dominican Republic (Dajabón and Pedernales Provinces); and Jamaica (Manchester Parish) (**new country record**) (Greater Antilles) (Fig. 67).

Remarks.—Zayas (1975) stated that this species was common throughout Cuba and that all of the type specimens collected were perching on vegetation, but no host information was provided. Nearns (2006) listed *P. exis* and Nearns *et al.* (2006) provided a color habitus photograph of the holotype deposited in the FDZC. Nearns & Turnbow (2005) provided the first record of this species outside of Cuba. Subsequently, a color photograph of a specimen collected in Jamaica was provided to us by F. Vitali (FVPC).

Plectromerus fasciatus (Gahan)

(Figs. 15a–c)

Pentomacrus fasciatus Gahan, 1895: 109.
Plectromerus fasciatus: Giesbert, 1985: 80.
Plectromerus sp.: Chalumeau & Touroult, 2005b: 113.

Diagnosis.—This distinctively large species is most similar to *P. turnbowi* in several characters including antennal segment proportions, gradually clavate metafemora, and weakly serrate metafemoral teeth. However, *P. fasciatus* differs in having the pronotum with dense, confluent, shallow punctation (pronotum with dense, moderately deep, somewhat evenly spaced punctation in *P. turnbowi*), elytral apices strongly subtruncate to truncate (rounded to weakly subtruncate in *P. turnbowi*), elytra with scattered to moderately dense, long, pale, suberect setae (elytra with few long, pale, suberect setae in *P. turnbowi*).

Redescription.—Male. Length 8.0–10.2 mm, width 1.9–2.2 mm (measured across humeri). Habitus as in Fig. 15a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head, pronotum, and elytra ferrugineus.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head slightly concave between antennal tubercles, which are slightly raised and separated by about the width of two antennal sockets; surface of vertex microsculptured, with moderately dense, irregular, shallow, punctures. Eyes coarsely-faceted, transverse, subreniform.

Antennae eleven segmented, about 1.3 times longer than body; scape bowed; third antennomere slightly longer than scape, more than twice the length of fourth; fifth antennomere longest, more than 3 times longer than fourth; an-

tennomeres 6–11 becoming progressively shorter, basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 6–10 produced externally. Scape with few long, suberect, pale hairs; antennomeres 2–7 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, slightly broader at base than apex; pronotal sides moderately inflated, arcuately constricted at basal third, and a slight inflation just before apex; basal margin slightly arcuate; disk convex, with scattered, long, suberect, pale hairs arising from deep punctures; each side of pronotum with coarse, deep punctures laterally and one or two long, suberect setae anterolaterally. Surface microsculptured, densely, shallowly punctate, slightly shining.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, about 2.8 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides nearly parallel, slightly sinuate around middle, evenly rounded to apex; elytral apices strongly subtruncate to truncate; epipleural margin moderately sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each elytron slightly raised. Elytral surface moderately shining; punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair; elytra with moderately dense, scattered, long, suberect, pale hairs.

Venter with prosternum strongly shining; one irregular patch of coarse, deep punctures in front of procoxae; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; procoxal cavities open behind. Mesosternum surface strongly shining, sparsely and finely punctate. Metasternum surface strongly shining, sparsely and finely punctate, with few deeper punctures and suberect, pale hairs interspersed. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining; finely, shallowly punctate; abdomen with sparse, long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, slightly longer than preceding sternite.

Legs with femora gradually clavate; meso- and metafemora slightly arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence and with scattered, suberect, pale hairs arising from shallow punctures; underside of each femoral club with a broad, acute triangular tooth with posterior edge weakly serrate, with irregular, indistinct "peaks"; meso- and metatibiae nearly straight, clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 15c).

Female. Length 7.3–10.2 mm; width 1.7–2.2 mm (measured across humeri). Similar to male except pronotal sides lacking coarse punctures and prosternum lacking irregular patch of punctures in front of procoxae. Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite.

Specimens examined.—*Type material:* Lectotype ♂ (Fig. 15a), "**GRENADA**, Balthazar, (Windward side), W.I., H.H. Smith, 107" (BMNH) [designated by Chalumeau & Touroult, 2005a: 112].

Other material: **MONTSERRAT**: Cassava Ghaut, Beattie House, UV. light, 632 ft., 16°45.91'N, 62°12.95'W, 23–03-IV-III-2002, A. Krakower, 1♀ (WIBF); same except 4–11-III-2002, 3♂, 2♀ WIBF); same except Malaise trap, 8–17-IV-2002, 1♂, 1♀ (WIBF); same except 5–15-II-2002, 1♂, 1♀ (WIBF); same except light trap, 14–21-VI-2002, 1♂ (WIBF); same except UV light, 21-I-15-II-2002, 1♂ (WIBF); same except 30-V-6-VI-2002, 1♀ (WIBF); same except 11–23-III-2002, 1♂, 1♀ (WIBF); same except trail from Cassava Ghaut south to waterpipe, 22-V-2003, K.A. Marske, 1♂ (ENPC); same except Cassava Ghaut to Lawyer's Mountain, 28-V-2003, M.A. Marske, 1♀ (WIBF); same except between Anne-Maries and Beattie house, 28-VI-2002, M.A. Ivie, 1♀ (ENPC).

Distribution.—Known from Grenada, St. Vincent, and Montserrat, **new country record** (Lesser Antilles) (Fig. 70).

Remarks.—*Plectromerus fasciatus* is endemic to the Lesser Antilles and has been collected at UV light and in Malaise traps. Chalumeau & Touroult (2005b) provided a color habitus photograph and stated that this species had been reared from "pois doux" (*Inga ingoides* (L.C. Rich.) Willd. (Fabaceae)) branches girdled by *Oncideres amputator* (Fabricius, 1792) (Cerambycidae: Lamiinae: Onciderini)

collected on Saint Vincent at 450 m elevation. Chalumeau & Touroult (2005a) designated the lectotype for this species and Woodruff *et al.* (1998) listed this species from Grenada.

A series of specimens from Montserrat (WIBF), mentioned by Chalumeau & Touroult as "*Plectromerus* sp." (2005b: 113), was examined by the authors and identified as *P. fasciatus*. Although the Montserrat specimens have less dense setae on the elytra, femora, and tibiae compared to the lectotype of *P. fasciatus*, the series otherwise has similar antennal segment proportions, pronotal and elytral punctation, elytral apices, metafemoral club shape, and metafemoral tooth serrations. Three additional specimens collected on Martinique (moist forest near Fort-de-France, emerged VI-VII 2006) are also believed to be *P. fasciatus* (J. Touroult, pers. comm.).

Vitali (2004) correctly noted that Zayas' (1975) listing of *P. fasciatus* from Cuba was incorrect. Chalumeau & Touroult (2005b) also commented on this in their treatment of *P. fasciatus*. The specimens in the FDZC were examined by the authors, confirming Vitali's (2004) statement that these were instead *P. pumilus* (e.g., Fig. 31b).

Plectromerus femoratus (Fabricius)

(Figs. 16a-c)

Saperda femoratus Fabricius, 1792: 316.
Pentomacrus femoratus White, 1855: 297.
Preoccupied, secondary homonym of *Saperda femoratus* Fabricius, 1792.
Plectromerus femoratus: Giesbert, 1985: 80.

Diagnosis.—At 17 mm, *P. femoratus* is distinctly larger than any other species in the genus. In addition to its size, the combination of the following characters will serve to distinguish this species from all congeners: antennae in males about twice the body length; scape with deep depression on dorsal surface (Fig. 16b); fifth antennomere distinctly longer than pronotum; pronotum globose, sides strongly, evenly rounded; and metafemoral club gradually clavate, distinctly elongate (Fig. 16c).

Redescription.—Based on male holotype *P. femoratus*. Length 17.0 mm, width 4.0 mm (measured across humeri). Habitus as in Fig. 16a. General form medium-sized, narrow, subcylindrical. Integument testaceous, with head, portions of scape, anterior portion of pronotum, and portions of elytra ferrugineus.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head concave between antennal tubercles, which are moderately raised and separated by about the width of two antennal sockets. Eyes coarsely-faceted, transverse, subreniform.

Antennae eleven segmented, about twice as long as body; scape bowed; third antennomere almost twice the length of scape, about twice the length of fourth; fifth antennomere longest, more than twice as long as fourth, distinctly longer than pronotum; antennomeres 6–11 becoming progressively shorter; seventh slightly bowed; sixth through eleventh distinctly longer than scape; antennomeres subcylindrical, 4–11 weakly flattened; apices of antennomeres 5–6 weakly produced externally. Scape with distinct dorsal and ventral depression at base (Fig. 16b); scape with sparse, short, pale, recumbent pubescence; antennomeres 2–3 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum globose, about as long as wide, widest at middle, slightly broader at base than apex; pronotal sides broadly and evenly rounded, abruptly constricted at basal third, with a slight inflation just before apex; disk convex, somewhat flattened, with one slightly raised, median callus immediately posterior to center, about as long as pedicel; disk with two slightly raised, submedial calli slightly anterior to center, and two smaller slightly raised, submedial calli slightly posterior to center; basal third of disk with two long, pale, recumbent or suberect seta positioned submedially, arising from deep punctures; lateral margins of pronotum with patch of coarse, deep punctures, and one or two long, suberect setae anterolaterally. Surface opaque, microsculptured, weakly shining, with dense, shallow punctation.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, slightly more than 3 times as long as pronotal length, about 1.2 times broader basally than pronotum at widest point (at middle); elytral sides nearly parallel, slightly sinuate around middle, evenly rounded to apex; elytral apices individually, evenly rounded; epipleural margin moderately sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each elytron slightly raised.

Elytral surface opaque; elytral punctation moderately dense, rather evenly spaced, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with prosternum moderately shining; one irregular patch of coarse, shallow punctures in front of procoxae; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.7 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind. Mesosternum surface moderately shining, sparsely and shallowly punctate. Metasternum surface moderately shining, microsculptured, sparsely punctate, with short, pale, recumbent seta arising from each puncture. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen moderately shining, finely, shallowly punctate; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, slightly longer than preceding sternite.

Legs with femora gradually clavate; clavate portion distinctly elongate, distinctly longer than base (Fig. 16c); meso- and metafemora slightly arcuate, shining, clothed with sparse, recumbent, short, pale pubescence; underside of each femoral club with a small, acute triangular tooth; metafemoral teeth with posterior edge weakly serrate, with about 12 small and irregular serration "peaks"; each peak with a short, curved, pale hair; metatibiae nearly straight, slightly sinuate, slightly flattened, about as long as metafemora; metatibiae gradually expanded distally, clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally.

Specimens examined.—*Type material:* Holotype ♂ (Fig. 16a), **JAMAICA**: handwritten label states: "this specimen is almost certainly the type of *Saperda femorata* Fabr., Ent. Syst. I. 2. P. 316" signed "C.J.G." (BMNH).

Distribution.—Known only from Jamaica (Greater Antilles) (Fig. 67).

Remarks.—The holotype is the only known specimen and nothing is known about the biology of this species. A handwritten label on the holotype, signed C.J.G., is believed to have been placed by C.J. Gahan, who stated that the "Fabrician description of this species seems to have been overlooked by White and other authors. I have little doubt that one of White's type specimens was the original type described by Fabricius (who states that it was in the British Museum). The species is one that may be easily identified" (Gahan 1895: 109).

Plectromerus giesberti Nearns & Branham, new species
(Figs. 17a-c)

Diagnosis.—From congeners, *P. giesberti* is distinguished by the combination of the following characters: pronotal surface with moderately dense, short pubescence; each elytron with two distinct oblique maculae and one arcuate-transverse macula; and metafemora strongly pedunculate-clavate with moderately serrate teeth. *Plectromerus giesberti* is most similar to *P. hovorei* new species (Figs. 22a–c) but is distinguished by the moderately serrate teeth with about 20–24 serration "peaks" (strongly, deeply serrate with about 10–14 serration "peaks" in *P. hovorei* new species) and the three distinct maculae per elytron (two distinct maculae per elytron in *P. hovorei* new species).

Description.—Female. Length 7.2–8.0 mm, width 1.7–2.0 mm (measured across humeri). Habitus as in Fig. 17a. General form small, narrow, subcylindrical. Integument testaceous, with portions of pronotum, scutellum and femoral apices ferrugineus; each elytron testaceous with three major macular regions as follows: (1) basal third with a ferrugineus, oblique, narrow, macula beginning below humerus and reaching sutural midpoint; (2) a ferrugineus, oblique, narrow, macula from sutural midpoint to just above apical third; and (3) apical third testaceous, with ferrugineus, arcuate-transverse, macula.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head nearly flat between antennal tubercles, which are slightly raised and separated by about the width of two antennal sockets; vertex microsculptured, with moderately dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, about as long as body; scape bowed; third antennomere about as long as scape, about 1.5 times longer than fourth;

fifth antennomere longest, slightly more than twice as long as fourth, about 1.3 times longer than third; basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 6–10 produced externally; eleventh antennomere slightly longer than tenth. Scape with short, pale, recumbent pubescence; antennomeres 2–6 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.5 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides broadly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin slightly arcuate; basal third of disk with two long, pale, recumbent setae positioned submedially, arising from deep punctures; lateral margins of pronotum without patch of coarse, deep punctures, but with one long, suberect seta anterolaterally. Surface opaque, microsculptured, sparsely and shallowly punctate, with a slightly raised median callus; surface with moderately dense short, recumbent, pale pubescence.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, about 2.6 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides moderately sinuate around middle (Fig. 17c), evenly rounded to apex; elytral apices individually, broadly rounded; epipleural margin strongly sinuate. Elytral disk moderately concave medially, subsuturally, creating a distinct costa on each elytron; base of each elytron slightly raised. Elytral surface strongly shining; elytral punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with prosternum moderately shining; area in front of procoxae without patch of coarse punctures; narrowest area of prosternal process between procoxae about 0.3 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind. Meso- and metasternum and surface moderately shining, sparsely and finely punctate, with dense, short, recumbent, pale pubescence. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen moderately shining, finely, shallowly punctate; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly rounded, slightly longer than preceding sternite.

Legs with femora pedunculate-clavate; basal portion of metafemora slightly longer than metafemoral club; meso- and metafemora moderately arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge moderately serrate, with about 20–24 serration "peaks"; each serration peak with a short, pale, curved hair; metatibiae strongly sinuate, slightly flattened, about half as long as metafemora; metatibiae gradually expanded distally, clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 17b).

Etymology.—This species is named in memory of the late Edmund F. Giesbert (1931–1999) who collected the first known specimen this species. Edmund's many contributions to the study of Neotropical cerambycids are a source of inspiration to us. The epithet is a noun in apposition.

Specimens examined.—*Type material:* Holotype ♀ (Fig. 17a), "**GUATEMALA, Departmento de Izabal**, Cerro Negro Norte, 15°21'N, 88°41'W, 1180m, 18–19. vii. 2001 DCH, DY, Univ. Calif. Riverside, Ent. Res. Museum, UCRC ENT 68968" (UCRC). 1 ♀ paratype: **GUATEMALA: Izabal Department**, 25 km SE Morales, 900 m, 31-V-2-VI-1997, E. Giesbert, J. Monzon (FSCA).

Distribution.—Known only from Izabal Department, Guatemala (Central America) (Fig. 71).

Remarks.—This species is described from two females and the male is unknown. The type series described herein represents the only known specimens and nothing is known about the biology of this species.

Plectromerus grimaldii Nearns & Branham †

(Figs. 18a, 19a–d, 20b, 20d)

Plectromerus grimaldii Nearns & Branham, 2005: 19.

Diagnosis.—From other congeners, *P. grimaldii* is distinguished by the following combination of characters: the shape and punctation of pronotum

(widest at middle, alveolate-punctate), the elytral punctation (dense, coarse), the glabrous pronotum and elytra, and the small, non-serrate metafemoral tooth (Fig. 19c). *Curius punctatus* and *P. exis* also have small metafemoral teeth which are not serrate, however these species are distinguished by having the third antennomere longest (fifth longest in *P. grimaldii*) and different pronotal dimensions: in *C. punctatus* the pronotum is almost as wide as long, in *P. exis* the pronotum has a distinct tubercle in the center and the length is about 1.8 times the width (1.5 times as long as wide in *P. grimaldii*).

Plectromerus grimaldii superficially resembles *P. tertiarius* in pronotal shape and elytral punctation. They differ, however, with respect to elytral apices (subtruncate in *P. grimaldii*, evenly rounded in *P. tertiarius*) and visible abdominal ventrite relationships (first ventrite as long as next three visible abdominal ventrites combined in *P. grimaldii*, first ventrite slightly longer than next two visible abdominal ventrites combined in *P. tertiarius*). In addition, significant differences are seen in antennomere morphology. These differences exceed the variation in antennal morphology seen in extant species and across gender in *Plectromerus*. In *P. grimaldii*, the fifth antennomere is about 1.9 times longer than the tenth (about 1.6 times longer in *P. tertiarius*), fifth antennomere about 1.5 times longer than seventh (about 1.1 times longer in *P. tertiarius*). In *P. tertiarius*, the seventh antennomere is slightly longer than the sixth (subequal in *P. grimaldii*) and the eleventh antennomere is slightly longer than the tenth (subequal in *P. grimaldii*). In addition, antennomeres 5–10 are distinctly produced externally in *P. tertiarius*, whereas in *P. grimaldii*, antennomeres 6–10 are only moderately produced externally (Figs. 20b– d). Additional comments on this species based on a second specimen are provided by Vitali (2006).

Specimens examined.—*Type material:* Holotype ♀, **DOMINICAN REPUBLIC**: No. DR-16–535 (AMNH).

Distribution.—Known only from Dominican amber fossils, Dominican Republic (Greater Antilles) (Fig. 66).

Remarks.—The holotype of *P. grimaldii* is included in a piece of Dominican amber (Oligo-Miocene). The specimen is amber yellow-brownish, moderately clear; cut and polished to a flat, oval shape, measuring 18.5 × 15.0 × 8.0 mm. Specimen is in good condition except damage to left antenna: antennomere 7 is incomplete, antennomeres 8–11 are missing. Although gender cannot be determined conclusively, we believe the holotype of *P. grimaldii* to be female based on the evenly, broadly rounded fifth visible abdominal ventrite and the lack of an irregular patch of coarse punctures in front of each prosternal coxa (a male characteristic seen in many extant species of *Plectromerus*).

Plectromerus hovorei Nearns & Branham, new species

(Figs. 22a–c)

Plectromerus n. sp.: Hovore, 2002: 13.

Diagnosis.—From congeners, *P. hovorei* is distinguished by the combination of the following characters: pronotal surface opaque, microsculptured; each elytron with one distinct oblique macula and one arcuate-transverse band; and metafemora strongly pedunculate-clavate with strongly, deeply serrate teeth. *Plectromerus hovorei* is most similar to *P. giesberti* new species (Figs. 17a–c) but is distinguished by the strongly, deeply serrate teeth with about 10–14 serration "peaks" (moderately serrate with about 20–24 serration "peaks" in *P. giesberti* new species) and the two distinct maculae per elytron (three distinct maculae per elytron in *P. giesberti* new species).

Description.—Male. Length 5.8–6.8 mm, width 1.4–1.7 mm (measured across humeri). Habitus as in Fig. 22a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head, pronotum ferrugineus; each elytron testaceous with two major macular regions as follows: (1) basal third with a ferrugineus, oblique, narrow, macula beginning below humerus and reaching sutural midpoint; (2) apical third with a ferrugineus, arcuate-transverse, narrow, macula.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head shallowly concave and nearly flat between antennal tubercles, which are slightly raised and separated by about the width of two antennal sockets; vertex microsculptured, with scattered, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere about as long as scape, about twice as long as fourth; fifth antennomere longest, about 3 times longer than fourth, about 1.5 times longer than third; basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 6–10 produced externally. Scape with short, pale, recumbent pubescence; antennomeres 2–7 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides broadly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin moderately arcuate; lateral margins of pronotum with patch of coarse, deep punctures, and one or two long, suberect setae anterolaterally. Surface opaque, microsculptured, sparsely and shallowly punctate, with a slightly raised median callus; basal third of disk with one or two long, pale, recumbent setae positioned submedially, arising from deep punctures.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 3 times as long as width at humeri, nearly 3 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides moderately sinuate around middle, evenly rounded to apex; elytral apices individually, broadly rounded; epipleural margin strongly sinuate. Elytral disk moderately concave medially, subsuturally, creating a distinct costa on each elytron; base of each elytron slightly raised. Elytral surface strongly shining; punctation moderately dense, coarse, and deep at basal third; elytral punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with prosternum moderately shining; one irregular patch of coarse, deep punctures in front of each procoxa (Fig. 22b); narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.3 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind. Mesosternum surface moderately shining, sparsely and finely punctate. Metasternum surface moderately shining, sparsely and finely punctate, with sparse deeper punctures and suberect, pale hairs interspersed. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining; finely, shallowly punctate; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, slightly longer than preceding sternite.

Legs with femora pedunculate-clavate; metafemoral club about as long as base; meso- and metafemora moderately arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge strongly, distinctly serrate, with about 10–14 serration "peaks"; each serration peak with a short, pale, curved hair; metatibiae strongly sinuate, slightly flattened, about 0.7 times as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 22c).

Female. Length 6.2–6.8 mm, width 1.5–1.7 mm (measured across humeri). Similar to male except pronotal sides lacking coarse punctures and prosternum lacking irregular patch of punctures in front of each procoxa. Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite.

Etymology.—This species is named in memory of the late Frank T. Hovore (1945–2006), for his inspiration and encouragement, and for making most of the type series available for study. Frank unexpectedly passed away during the course of this research and will be greatly missed by the cerambycid community. The epithet is a noun in apposition.

Specimens examined.—*Type material:* Holotype ♂ (Fig. 22a), "**HONDURAS: Francisco Morazán**, El Rincon, 1-XII-1995, R. Turnbow" (FSCA). Allotype ♀, "**COSTA RICA: Province Guanacaste**, Est. Cacao, 1000–1400m, Lado suroeste del Volcán Cacao, Malaise trap, 1990, L-N 323300, 375700, INBIO CRI000 070459" (INBio). 15 paratypes as follows: **COSTA RICA: Guanacaste Province**: Est. Cacao, 1000–1400 m, Lado suroeste del Volcán Cacao, Malaise Trap, VII-1989-III-1990, L-N-323300, 375700, INBIO CRI000 258383, 1♂ (INBio); same except 258362, 1♂ (INBio); same except 258102, 1 ♂ (INBio); same except 258096, 1♂

(INBio); same except GNP Biodiv. Survey 247525, 1♂ (USNM); same except 168806, 1♀ (ENPC); same except 258213, 1♂ (INBio); same except 258079, 1♀ (INBio); same except 168868, 1♀ (INBio); same except 1988– 1989, 103614, 1♀ (INBio); same except 073785, 1♀ (USNM); same except 168807, 1♂ (INBio); same except Est. Maritza, 600 m, lado O Vol. Orosi, I-IV-1992, L-N 326900, 373000, 377644, 1♂ (FSCA); same except P. Campos, II-1992, 888519, 1♀ (FSCA); same except 377788, 1♂ (ENPC).

Distribution.—Known from Francisco Morazán Department, Honduras and Guanacaste Province, Costa Rica (Central America) (Fig. 66).

Remarks.—This species is described from 17 specimens and the type series described herein represents the only known specimens. All specimens except the holotype were collected in Malaise traps, most at 600–1400 m elevation. Hovore (2002) listed this species from Costa Rica and Thomas *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus josephi Nearns & Branham, new species
(Figs. 23a–c)

Diagnosis.—From congeners, *P. josephi* is distinguished by the combination of the following characters: scape with shallow depression dorsally; pronotal disk with moderately raised calli; and metafemoral teeth weakly serrate (almost smooth). *Plectromerus josephi* is most similar to *P. lingafelteri* (Figs. 24a-c) but is distinguished by the moderately raised pronotal disk calli (more weakly raised in *P. lingafelteri*), testaceous integument (darker in *P. lingafelteri*), and vertex of head with moderately dense, coarse, shallow punctation (vertex of head with sparse, smaller, more shallow punctation in *P. lingafelteri*).

Description.—Male. Length 5.6–7.0 mm, width 1.3–1.5 mm (measured across humeri). Habitus as in Fig. 23a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head, pronotum, and antennae ferrugineus; each elytron testaceous with three major macular regions as follows: (1) basal third with a ferrugineus, oblique, narrow, irregular, vaguely defined, macula beginning below humerus and reaching sutural midpoint; (2) a ferrugineus, oblique, thicker, irregular, vaguely defined, macula from sutural midpoint to about apical third, not reaching margin; and (3) apical third testaceous, with narrow, ferrugineus, oblique, irregular, vaguely defined, macula from just below apical third to about below suture midpoint.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head somewhat concave between antennal tubercles, which are moderately raised and separated by the width of about 2.3 antennal sockets; vertex microsculptured, with dense, coarse, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere slightly longer than scape, nearly twice as long as fourth; fifth antennomere longest, almost 3 times longer than fourth; antennomeres 6–10 becoming progressively shorter; eleventh antennomere slightly longer than tenth; basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 5–10 produced externally. Scape with short, pale, recumbent pubescence; scape with shallow depression dorsally; antennomeres 2–6 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.5 times as long as wide, widest at middle, apex about as wide as base; pronotal sides broadly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin slightly arcuate; disk convex, somewhat flattened, with one moderately raised, median callus immediately posterior to center, and two moderately raised, submedial calli slightly anterior to center; disk with two smaller slightly raised, submedial calli slightly posterior to center (Fig. 23b); basal third of disk with two long, pale, recumbent setae positioned submedially, arising from deep punctures; lateral margins of pronotum with patch of coarse, deep punctures, and two long, suberect setae anterolaterally. Surface opaque, microsculptured, feebly shining, with portions of calli granulose.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, about 2.5 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides nearly parallel, slightly sinuate around middle, evenly rounded to apex; each elytron individually, evenly

rounded; epipleural margin moderately sinuate. Elytral disk slightly concave medially, subsuturally, creating a moderately raised costa on each elytron; base of each elytron slightly raised. Elytral surface moderately shining; elytral punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with prosternum moderately shining; one irregular patch of coarse, deep punctures in front of procoxae; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind. Mesosternum surface moderately shining, sparsely and finely punctate. Metasternum surface moderately shining, sparsely and finely punctate, with sparse deeper punctures and suberect, pale hairs interspersed. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining; finely, shallowly punctate; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, slightly longer than preceding sternite.

Legs with femora gradually clavate; metafemoral club about as long as base; meso- and metafemora slightly arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge nearly smooth, weakly serrate, with indistinct and irregular serration "peaks"; metatibiae moderately sinuate, slightly flattened, about 0.7 times as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 23c).

Female. Length 9.2 mm; width 2.1 mm (measured across humeri). Similar to male except pronotal sides lacking coarse punctures and prosternum lacking irregular patch of punctures in front of each procoxa. Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite.

Etymology.—This species is named in memory of the first author's father, Joseph Eugene Nearns (1929–1988), who enlisted in the US Navy at the age of 14 during World War II and served aboard the amphibious attack transport ship USS Pondera (APA-191) as a radioman in the Pacific theater. Joseph remains a role model and inspiration to EHN. The epithet is a noun in apposition.

Specimens examined.—*Type material:* Holotype ♂ (Fig. 23a), "**DOMINICAN REPUBLIC**, La Cumbre de Puerto Plata, 2000', May 8–9, 1985, E. Giesbert, Col." (FSCA). Allotype ♀, "**DOMINICAN REPUBLIC, PUERTO PLATA**, R.D., La Cumbre, 26-XII-1978, cols. Dominguez-Silfa, M.N.H.N." (MNDR, to be deposited at USNM). 2 paratypes: **DOMINICAN REPUBLIC**: 1♂, same data as holotype (ENPC); **PUERTO PLATA PROVINCE**: La Cumbre Research Station, 2000 ft., 8–9-V-1985, J.E. Wappes, 1♂ (JEWC).

Distribution.—Known only from Puerto Plata Province, Dominican Republic (Greater Antilles) (Fig. 71).

Remarks.—This species is described from four specimens. The type series described herein represents the only known specimens and nothing is known about the biology of this species. Thomas *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus lingafelteri Micheli & Nearns
(Figs. 24a–c, 25a)

Plectromerus lingafelteri Micheli & Nearns, 2005: 25

Diagnosis.—This species is distinguished from the presently known congeners by the combination of the following characters: the opaque, microsculptured, finely punctate pronotum, the smooth metafemoral tooth, and the elytral maculation. At first glance, *P. lingafelteri* resembles *P. dentipes* (Fig. 9a) but *P. dentipes* has a shiny pronotum, the metafemoral tooth is serrate, and the elytral apex is moderately subtruncate (rounded in *P. lingafelteri*). Another species with a rather intricate elytral pattern is *P. exis* (Fig. 14a), but *P. lingafelteri* is easily recognized by the shape and length of the pronotum, the length of the third antennomere, and the elytral punctation. In *P. exis*, the pronotum has a distinct tubercle in the center and the length is about 1.8 times the width (1.5 to 1.6 in *P. lingafelteri*), the third antennomere is distinctly longer than the scape (subequal in *P. lingafelteri*), and the elytral dark areas are opaque and microsculptured (not so in *P. lingafelteri*).

Specimens examined.—*Type material:* Holotype ♂ (Fig. 24a), "**DOMINICAN REPUBLIC**, Pico Duarte Trail, 3300 ft., Los Tablones, beating, 19°08.222'N, 70°27.736'W, 29 June 2004, S. Lingafelter" (USNM). Allotype ♀, "**DOMINICAN REPUBLIC, PEDERNALES PROVINCE**, PN Sierra Baoruco, Las Abejas, 18°09.011'N, 71°37.342'W, 1150 meters, 11 July 2004, blacklight, C. J. Micheli, col." (USNM). 14 paratypes as follows: **DOMINICAN REPUBLIC: AZUA PROVINCE**: E side of crest, Sierra Martín García, 7 km WNW Barrero, 18–21N, 70–58W, 860 m, cloud forest adjacent to disturbed forest, 25–26-VII-1992, C. Young, R. Davidson, S. Thompson, J. Rawlins, 1♀ (CMNH). **BARAHONA PROVINCE**: 4.5 km S Barahona, 22-V-1992, R. Turnbow, 1♂ (RHTC). **HATO MAYOR PROVINCE**: Parque Nacional Los Haitises, bosque humido, W Sabana del Mar, 1–2-IV-1992, M. Ivie, D. Sikes, Lanier, 2♂ (WIBF). **LA VEGA PROVINCE**: same data as holotype, except day collected, 1♂ (USNM); same except Pico Duarte Trail, Ciénaga to Los Tablones, beating, 19°08.222'N, 70°27.736'W, 29-VI-2004, C.J. Micheli, 2♂ (JAMC); same except 3300 ft., Los Tablones, blacklighting, 17-VII-2004, S.W. Lingafelter, 2♂, 1♀ (USNM). **PEDERNALES PROVINCE**: Parque Nacional Sierra Baoruco, Las Abejas, 1150 m, 18°09.011'N, 71°37.342'W, ex. dead log with white fungus, 11-VII-2004, S. Lingafelter, 1♂, 1♀ (USNM); same except 25.5 km N Cabo Rojo, 21-V-1992, R. Turnbow, 1♂ (RHTC); same except 12–21-V-1992, M.C. Thomas, 1♂ (FSCA).

Distribution.—Known from Azua, Barahona, La Vega, and Pedernales Provinces, Dominican Republic (Greater Antilles) (Fig. 66).

Remarks.—The intensity and breadth of maculations seem to be variable among specimens. Some specimens are mostly ferrugineus without any dark areas but with the described light elytral pattern. Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus michelii Nearns & Branham, new species
(Figs. 26a–c)

Diagnosis.—From congeners, *P. michelii* is distinguished by the combination of the following characters: elytra with scattered long, suberect setae; pronotal disk microsculptured with dense, shallow punctation; and metafemoral teeth weakly, irregularly serrate. This species is similar to *P. wappesi* and *P. unidentatus* in several characters including antennal segment proportions, pronotal disk punctation, shape of elytral apices, and metafemoral and metatibial shape. However, *P. michelii* is easily be distinguished from *P. unidentatus* by the scattered long, suberect setae on the elytra (elytra without long, suberect setae *P. unidentatus*), and from *P. wappesi* by the weakly, irregularly serrate metafemoral teeth (moderately, evenly serrate in *P. wappesi*), and lack of scattered long, suberect setae on scape, pronotal disk, and metafemora (scape, pronotal disk, and metafemora with long, suberect setae in *P. wappesi*).

Description.—Female. Length 6.7 mm, width 1.5 mm (measured across humeri). Habitus as in Fig. 26a. General form small, narrow, subcylindrical. Integument testaceous, with portions of antennae, and pronotum ferrugineus; head dark reddish-brown; each elytron testaceous with two vaguely defined macular regions as follows: (1) basal third with one narrow, transverse, ferrugineus, macula not reaching epipleural margins, and (2) apical third with one thicker, subcircular, ferrugineus, macula not reaching epipleural margins.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head nearly flat and slightly concave between antennal tubercles, which are separated by about the width of two antennal sockets; vertex microsculptured, with dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, about as long as body; scape bowed; third antennomere about as long as scape, a little longer than fourth; fifth antennomere longest, about twice as long as fourth, about 1.5 times as long as third; basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 5–8 slightly produced externally (antennomeres 9–11 missing on left antenna, and 5–11 missing on right). Scape with short, pale, recumbent pubescence; antennomeres 2–7 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, about as wide at base as apex; pronotal sides slightly inflated, slightly constricted at basal third, and a slight inflation just before apex; basal margin slightly ar-

cuate; disk convex, somewhat flattened, with two slightly raised, submedial inflations slightly anterior to center, and two smaller slightly raised, submedial inflations slightly posterior to center; lateral margins of pronotum without patch of coarse, deep punctures; lateral margins with one long, recumbent seta anterolaterally. Surface opaque, microsculptured, slightly shining, with dense, shallow punctation, basal third of disk with two long, pale, recumbent setae positioned submedially, arising from deep punctures.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, about 2.8 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides nearly parallel, slightly sinuate, evenly rounded to apex; elytral apices individually rounded, nearly subtruncate; epipleural margin slightly sinuate (Fig. 26c). Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each slightly raised. Elytral surface moderately shining; punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; punctures each with a short, fine, pale, recumbent hair, with scattered long, suberect setae (each about as long as scape) (Fig. 26c).

Venter with prosternum moderately shining; with scattered, coarse, shallow punctation; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind. Mesosternum surface moderately shining, sparsely punctate with coarse, shallow punctures. Metasternum surface moderately shining, with moderately dense, deep punctures, with a few suberect, pale hairs interspersed. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen moderately shining; finely, shallowly punctate, with scattered coarse punctures; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly rounded, slightly longer than preceding sternite.

Legs with femora pedunculate-clavate; metafemoral club slightly longer than base; meso- and metafemora slightly arcuate, shining, clothed with sparse, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge weakly, shallowly serrate, with about 16 irregular serration "peaks"; each peak with a short, curved, pale hair; metatibiae nearly straight, slightly sinuate, slightly flattened, about 0.7 times long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 26b).

Etymology.—This species is named in honor of Julio A. Micheli, professor of fine arts and foremost expert on the cerambycid fauna of Puerto Rico, for his friendship, encouragement, and advice. The epithet is a noun in apposition.

Specimens examined.—*Type material:* Holotype ♀ (Fig. 26a), "**CAYMAN ISLANDS, Grand Cayman**, West Bay (Town Hall Cresent), 21-VII-1-VIII-1986, Diderot Gicca, blacklight trap" (FSCA). Paratype: 1♀, **CAYMAN ISLANDS, Grand Cayman**, 24-II-1962, C.B. Lewis, P. Price (MZSP).

Distribution.—Known only from Grand Cayman, Cayman Islands (Greater Antilles) (Fig. 69).

Remarks.—This species is described from two female specimens, one collected in a blacklight trap. The type series described herein represents the only known specimens and nothing is known about the biology of this species. Thomas *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus morrisi Nearns & Branham, new species
(Figs. 27a–d)

Diagnosis.—This species is unusual among *Plectromerus* species in having the procoxal cavities narrowly open behind (Fig. 52b), similar only to *P. dominicanus*. From congeners, *P. morrisi* is distinguished by the combination of the following characters: pronotal disk opaque, moderately granulose; elytral apices individually, sinuately rounded; and metafemoral teeth strongly, deeply serrate. This species is most similar to *P. wappesi* but differs from it in having the pronotal disk somewhat wrinkled, nearly granulose (microsculptured with dense, round, shallow punctation in *P. wappesi*), strongly, deeply serrate metafemoral teeth (moderately, evenly serrate in *P. wappesi*), and elytra apices individually, sinuately rounded (jointly rounded to subtruncate in *P. wappesi*).

Description.—Female. Length 5.0–6.8 mm; width 1.1–1.5 mm (measured across humeri). Habitus as in Fig. 27a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head, pronotum, elytra, and femoral apices ferrugineus.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head slightly concave between antennal tubercles, which are slightly raised and separated by the width of about two antennal sockets; vertex microsculptured, with dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, ovate, with shallow indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere about as long as scape, about 1.5 times longer than fourth; fifth antennomere longest, slightly more than twice as long as fourth, about 1.5 times longer than third, only slightly longer than sixth and seventh; eleventh slightly longer than tenth, about as long as scape; basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 6–10 produced externally. Scape with short, pale, recumbent pubescence; antennomeres 2–5 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.5 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides broadly inflated, arcuately constricted at basal third, and a slight inflation just before apex; basal margin slightly arcuate; disk convex, with scattered, long, suberect, pale hairs; basal third of disk with two long, pale, recumbent setae positioned submedially, arising from deep punctures; pronotal sides lacking coarse punctures; lateral sides of pronotum with two long, suberect setae anterolaterally. Surface opaque, slightly shining; pronotal disk somewhat wrinkled, moderately granulose.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, about 2.3 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides slightly sinuate around middle, evenly rounded to apex; elytral apices individually, sinuately rounded; epipleural margin strongly sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each elytron slightly raised. Elytral surface strongly shining; punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair; elytra with scattered, long, suberect, pale hairs.

Venter with prosternum strongly shining; lacking irregular patch of punctures in front of each procoxa; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.3 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities narrowly open behind (Fig. 27b). Meso- and metasternum surface strongly shining, sparsely and finely punctate. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining, sparsely and finely punctate, abdomen with two long, suberect, pale hairs per sternite; fifth sternite evenly, broadly rounded, about 1.5 times longer than preceding sternite.

Legs with femora pedunculate-clavate; metafemoral club slightly longer than base; meso- and metafemora slightly arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence and with sparse, scattered, suberect, pale hairs arising from shallow punctures; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge strongly, deeply serrate, with about 14–17 serration "peaks"; each peak with a short, curved, pale hair; metatibiae moderately sinuate slightly flattened, about 0.5 times as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 27d).

Male. Length 6.2 mm, width 1.4 mm (measured across humeri). Similar to female except prosternum with one irregular patch of coarse, deep punctures in front of each procoxa (Fig. 27c); lateral margins of pronotum with patch of coarse, deep punctures. Abdomen with terminal sternite fifth sternite broadly subtruncate, slightly longer than preceding sternite.

Etymology.—We take pleasure in naming this species for Roy F. Morris II, for his friendship, ad-

vice, and companionship on many collecting trips. Roy has collected extensively in the Nearctic and Neotropics and has contributed greatly to our knowledge of Cerambycidae. The epithet is a noun in apposition.

Specimens examined.—*Type material:* Holotype ♀ (Fig. 27a), "**PANAMÁ, Pan. Pr.**, 12 km N El Llano, 24 Jan 1993, F.T. Hovore, col." (USNM). Allotype ♂, "**PANAMÁ, Pma Province**, Cerro Campana 850m, 8°40'N, 79°56'W, 12 Mar. '71, W. Biven" (USNM). 3 paratypes as follows: **PANAMÁ: Coclé Province**, El Valle, 1-III-1992, E. Giesbert, 1♀ (FSCA). **Panamá Province**: Liano-Carti Rd., Km-9, elevation 350 m, 16-II-91, Stockwell, 1♀ (ENPC); same except Canal Zone, Diablo, 2-IV-78, Wm. Biven, 1♀ (RFMC).

Distribution.—Known from Coclé and Panamá Provinces, Panamá (Central America) (Fig. 70).

Remarks.—This species is described from one male and four females. The type series described herein represents the only known specimens and nothing is known about the biology of this species. A female specimen was chosen as the holotype since the only male specimen known is damaged (left antenna missing antennomeres 4–11). Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus navassae Nearns & Steiner
(Figs. 28a, 28d–g)

Plectromerus navassae Nearns & Steiner, 2006: 63.

Diagnosis.—This species is distinctive from the known congeners and can be distinguished by the combination of the following characters: the alveolate-punctate pronotum, the presence of long, suberect hairs on elytra, apical half of elytra and abdominal segments dark brown or black, and moderately serrate metafemoral teeth. Three other known species, *P. distinctus* (Fig. 11a), *P. fasciatus* (Fig. 15a), and *P. wappesi* (Fig. 36a) also possess long, suberect elytral hairs and serrate metafemoral teeth. From *P. distinctus*, the new species can easily be recognized by the alveolate-punctate pronotum (granulose punctures in *P. distinctus*) and elytral coloration (elytra with small, ferrugineus fasciae in *P. distinctus* and *P. fasciatus*). From *P. wappesi*, the new species can easily be recognized by elytral coloration (elytra with small, ferrugineus fasciae in *P. wappesi*). The clavate metafemora and slightly sinuate metatibiae in *P. navassae* (Fig. 28g) are somewhat similar to *P. distinctus* (Fig. 28h) but differ significantly from *P. wappesi* which possess pedunculate-clavate metafemora and more strongly sinuate metatibiae (Fig. 28i).

Specimens examined.—*Type material:* Holotype ♂ (Fig. 28a), "**NAVASSA ISLAND**, near lighthouse, 80 m., 18°23.82'N, 75°00.74'W, 3 August 1998, Collrs. W.E. Steiner, J.M. Swearingen, *et al.*, at black light in open weedy scrub near mixed forest (*Ficus, Metopium, Thrinax*) on limestone and red oolitic soil" (USNM). Allotype, ♀, "NAVASSA ISLAND, central forest area, 70 m., 18°24.08'N, 75°00.69'W, 28 July 1998, Collrs. W.E. Steiner, J.M. Swearingen, *et al.*, at black light in gap of mixed forest (*Ficus, Metopium, Thrinax*) on limestone" (USNM). 15 paratypes as follows: **NAVASSA ISLAND**: same data as allotype, 1♀ (USNM); same except central forest area, 70 m, 18°23.99'N, 75°00.67'W, 26-VII-4-VIII-1998, Malaise trap in gap of mixed forest (*Ficus, Metopium, Coccoloba, Sideroxylon, Thrinax*) on limestone, W.E. Steiner, J.M. Swearingen, *et al.*, 2♂ (USNM); same except central forest area, 1♂ (UCRC); near lighthouse, 80 m, 18°23.82'N, 75°00.74'W, 24 July-4 Aug. 1998, taken in Malaise trap, edge of open weedy scrub and mixed forest (*Ficus, Metopium, Thrinax*) on limestone, 1♂, 1♀ (FSCA); same except near lighthouse, 80 m, 26-VII-1998, at black light, on limestone and red oolitic soil, 1♂ [dissected] (ENPC); same except 31-VII-1998, 1♀ (ENPC); same except 2-VIII-1998, 1♀ (CMNH); same except E end of east savanna, 65 m, 18°23.75'N, 75°00.52'W, 1-VIII-1998, 1♂ (CMNH); same except forest west of lighthouse, 75 m, 18°23.91'N, 75°00.81'W, 30-VII-4-VIII-1998, Malaise trap in moist depression of mixed interior forest (*Ficus, Sideroxylon, Metopium, Coccoloba*), 1♀ (EMEC); same except 30-VII-1998, at black light, 2♀ (AMNH, WIBF); same except bluff of SW rim, 65 m, 18°23.75'N, 75°00.94'W, 25–30-VII-1998, Malaise trap in open mixed forest (*Ficus, Metopium, Coccoloba*) at rim of upper terrace on limestone and red oolitic soil, 1 ♀ (TAMU); same except 7-V-1999, S. Navarro, 1 ♀ (USNM).

Distribution.—Known only from Navassa Island (Greater Antilles) (Fig. 69).

Remarks.—*Plectromerus navassae* is believed to be endemic to Navassa Island and the type series represents the only known specimens. Lingafelter

et al. (2007) provided a color habitus photograph of the holotype.

Plectromerus navassae is recorded from the following plants: *Sideroxylon foetidissimum* Jacquin (Sapotaceae), *Ficus populnea* Willdenow var. *brevifolia* (Nuttall) Warb (Moraceae), *Coccoloba diversifolia* Jacquin (Polygonaceae), *Metopium brownei* (Jacquin) (Anacardiaceae), *Thrinax* Sw. (Arecaceae).

Plectromerus ornatus Fisher
(Figs. 29a–c)

Plectromerus ornatus Fisher, 1947: 34.

Diagnosis.—From congeners, *P. ornatus* is distinguished by the combination of the following characters: antennomeres 5–11 equal to or longer than third; pronotum microsculptured, with scattered, large, shallow punctures; pronotum with distinct, small dark maculae; metafemoral gradually clavate; metafemoral teeth small, not serrate.

Specimens examined.—*Type material:* Holotype ♂ (Fig. 29a), "**CUBA, Oriente**, Moa, Nov. 3–16 / 45, J. Acuña, Col., Type. No. 58119 U.S.N.M." (USNM).

Other specimens: **CUBA: Matanzas Province**, Ciénaga Zapata, at Playa Larga, collected in Malaise trap, 11–12-II-1981, P. Spangler, A. Vega, 2♀ (WIBF).

Distribution.—Known from Holguín and Matanzas Provinces, Cuba (Greater Antilles) (Fig. 69).

Remarks.—Fisher (1947) described this small species (approximately 5.5 mm) from a single male specimen and Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype. This species is rarely collected and only three specimens were available for study (including two females collected in Malaise traps). No specimens were available for study in the three largest collections in Cuba (FDZC, IESC, MNHN) and Zayas (1975) stated that he had never collected it.

Plectromerus pinicola Zayas
(Figs. 30a–c)

Plectromerus pinicola Zayas, 1975: 125.

Diagnosis.—From congeners, *P. pinicola* is distinguished by the combination of the following characters: strongly shining integument; metafemora with teeth weakly serrate, nearly smooth; metatibiae nearly straight (Fig. 30c). This species is most similar to *P. pumilus* but is easily distinguished by its larger size, lack of two dark pronotal maculae (present in *P. pumilus*), and prosterna in males with patch of coarse punctures in front of procoxae (prosterna in males without one distinct patch of coarse punctures in front of each procoxa in *P. pumilus*).

Redescription.—Male. Length 6.0–6.7 mm, width 1.5–1.6 mm (measured across humeri). Habitus as in Fig. 30a. General form small, narrow, subcylindrical. Integument testaceous, with head, basal antennomeres, portions of pronotum ferrugineus; each elytron testaceous with three major macular regions as follows: (1) basal third with a ferrugineus, arcuate, broad, irregular macula beginning below humerus and not reaching elytral suture; (2) a ferrugineus, transverse, narrow macula not reaching elytral suture; and (3) apical third testaceous, almost entirely occupied by a large, ferrugineus, irregular macula.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head slightly concave between antennal tubercles, which are slightly raised and separated by about the width of two antennal sockets; vertex weakly microsculptured, with scattered, deep punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere about as long as scape, almost twice as long as fourth; fifth antennomere longest, about 2.5 times longer than fourth, about 1.5 times longer than third; antennomeres 6–10 becoming progressively shorter; eleventh slightly longer than tenth; basal antennomeres subcylindrical, from third moderately flattened; apices of antennomeres 5–10 produced externally. Antennae with short, recumbent, pale pubescence; antennomeres 2–11 ciliate above and beneath with coarse, short, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides slightly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin slightly arcuate; disk convex; each side of pronotum with patch of coarse, deep punctures laterally. Basal third of disk with one long, pale, recumbent seta

positioned submedially, arising from a deep puncture; one long, recumbent seta anterolaterally. Surface weakly microsculptured, sparsely, finely, shallowly punctate, strongly shining.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.7 times as long as width at humeri, about 2.7 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides nearly parallel, evenly rounded to apex; elytral apices broadly rounded; epipleural margin moderately sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each elytron slightly raised. Elytral surface strongly shining; punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with prosternum strongly shining; one irregular patch of coarse, deep punctures in front of each procoxa; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; procoxal cavities open behind. Mesosternum surface strongly shining, sparsely and finely punctate. Metasternum surface strongly shining, sparsely and finely punctate, with few deeper punctures and suberect, pale hairs interspersed. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining; finely, shallowly punctate; abdomen with sparse, long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, about as long as preceding sternite.

Legs with femora gradually clavate; meso- and metafemora slightly arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth with posterior edge nearly smooth, weakly serrate, with irregular, indistinct "peaks"; meso- and metatibiae nearly straight; metatibiae clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 30c).

Female. Similar to male except pronotal sides lacking coarse punctures and prosternum lacking irregular patch of punctures in front of procoxae. Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite.

Specimens examined.—*Type material:* Lectotype ♂, "**CUBA, P. Rio**, Hochmut, Malas Aguas, det F. de Zayas, 3–1969" (FDZC) [designated by Nearns *et al.*, 2006: 2].

Other material: **CUBA: Pinar Del Rio Province**: 12 1/2 K., S of Pinar Rio, 12–23-IX-13, 2♂ (AMNH, USNM); same except Bermejales, Pinar Galalon, Los Palacios, *Pinus tropicalis*, 1980–1981, IV-III Marz, 1♂ (IESC); same except (Morelet), V-IV Apr., 2♀ (IESC); same except VII-II May, 1♂ (IESC); same except Malas Aguas, III-1969, Hochmut, 3 specimens [gender undetermined] (FDZC); same except El Moncada, Viñales, 15-V-2003, Sergio Devesa, 1 specimen [gender undetermined] (SDPC).

Distribution.—Known only from Pinar del Rio Province, Cuba (Greater Antilles) (Fig. 69).

Remarks.—*Plectromerus pinicola* is endemic to Cuba and known only from Pinar del Rio Province in the western portion of the island. Zayas (1975) stated that this species was reared from cut pine branches and label data indicates that *Pinus* L. (Pinaceae) is a probable host. Nearns (2006) listed *P. pinicola* and Nearns *et al.* (2006) studied the four specimens in the syntype series at the FDZC, designated the lectotype, and provided a color habitus photograph of the lectotype.

Plectromerus pumilus Cazier & Lacey
(Figs. 31a–d)

Plectromerus pumilus Cazier & Lacey, 1952: 33.
Pentomacrus fasciatus: Zayas, 1975: 127. Misidentification.

Diagnosis.—From congeners, *P. pumilus* is separated by the combination of the following characters: pronotal disk with two distinct, small, round, dark, granulose maculae; strongly shining integument; males with lateral margins of pronotum with patch of coarse punctures, but prosternum without patch of coarse punctures in front of procoxae (Fig. 31c); and metafemora with teeth nearly smooth, weakly serrate (Fig. 31d). This species is similar to *P. dentipes* but is easily distinguished by the two dark pronotal maculae (absent in *P. dentipes*); metafemoral teeth with edge nearly smooth, weakly serrate (metafemoral tooth slightly serrate to moderately serrate in *P. den-*

tipes); prosterna in males lacking patch of coarse punctures in front of procoxae (prosterna in males with one distinct patch of coarse punctures in front of each procoxa in *P. dentipes*).

Specimens examined.—*Type material:* Holotype ♂ (Fig. 31a), "**BAHAMAS, South Bimini Island**, B.W.I., June 1951, M. Cazier, C. & P. Vaurie collectors" (AMNH).

Other material. **BAHAMAS: Andros Island**: Behring Point, 8-VI-2001, R. Turnbow, 2♀ (RHTC); same except 5-VI-2004, 1♂, 1♀ (RHTC); same except 5-VI-2004, M.C. Thomas, 1♀ (FSCA); same except beating, 8-VI-2001, 1♀ (FSCA); same except Maidenhair Coppice, 11-VI-2004, 1♀ (FSCA); same except Bowen Sounds, 8-VI-2001, 1♂ (JEWC); same except Maidenhair Coppice, 4-VI-2001, 1♂ (RHTC); same except Money Point, 7-VI-2004, 1♂ (RHTC); same except Mastic Point, 9-VI-2004, 1♂ (RHTC); same except Forfar Field Station, 6-VI-2004, 1♀ (RHTC). **Eleuthera Island**: Rainbow Bay, Malaise trap, 1-VII-1987, D.B. & R.W. Wiley, 1♂, 5♀ (FSCA); same except 11-XI-19-XII-1986, 1♂ (FSCA); same except XI-1986, J.R. Wiley, 1♂, 1♀ (FSCA); same except 5–10-XI-1986, J.R. Wiley, 2♀ (FSCA); same except 16–26-X-1985, 1♀ (FSCA); same except 21-X-1985, 1♂ (FSCA). **Exuma Island**: Hummingbird Cay, W of Georgetown, 11-VI-1968, B.K. Dozier, 1♂, 1♀ (FSCA). **New Providence Island**: 5 miles E Clifton Pier, 10–11-IV-65, B.D. Valentine & R.W. Hamilton, 1♂ (WIBF). **Ragged Island Range:** Buena Vista Cay, 22-III-65, B.D. Valentine & R.D. Hamilton, 1♂ (WIBF). **South Bimini Island**: 14-VI-1967, B.K. Dozier, 2♂, 1♀ (FSCA, EMEC); same except 15-VI-1967, B.K. Dozier, 2♂, 1♀ (FSCA). **CUBA: La Habana Province**: Camping Peñas Blancas, Jibacoa, Santa Cruz del Norte, a la luz (250 W vapor Hg), 7-IV-2003, Sergio Devesa, 2 specimens [gender undetermined] (SDPC); same except Boca de Canasí, 24-IX-2004, 1 specimen [gender undetermined] (SDPC). **Matanzas Province**: Ciénaga de Zapata, V-1962, F. de Zayas, 1 specimen [gender undetermined] (FDZC). **Pinar Del Rio Province**: Pen. Guanacahabibes, VII-1955, F. de Zayas, 3 specimens [gender undetermined] (FDZC); same except V-53, P. Mendoza, 1 specimen [gender undetermined] (FDZC).

Distribution.—Known from Bahamas (Andros Island, Eleuthera, Exuma, New Providence, Ragged Island Group, and South Bimini) and Cuba, **new country record** (La Habana, Matanzas, Pinar del Rio Provinces) (Greater Antilles) (Fig. 72).

Remarks.—This species has been collected at lights, beating vegetation, and in Malaise traps. Vitali (2004) correctly noted that Zayas' (1975) listing of *P. fasciatus* from Cuba was instead *P. pumilus* (e.g. Fig. 31b). Zayas (1975) stated that this species was not commonly collected in Cuba and did not list any host information.

Plectromerus pumilus is the smallest species in the genus, ranging in size from 3.5–5.2 mm in length. Male specimens examined measured: length 3.5–5.1 mm, width 0.9–1.2 mm (measured across humeri); female specimens examined measured: length 3.8–5.2 mm; width 0.9–1.3 mm (measured across humeri).

Plectromerus ramosi Micheli & Nearns
(Figs. 24d–h, 25b)

Plectromerus ramosi Micheli & Nearns, 2005: 30.
Plectromerus sp.: Chalumeau & Touroult, 2005b: 113.

Diagnosis.—This species can be confused with *P. serratus* is be distinguished by the punctation of the pronotum: in *P. serratus*, the pronotum is impunctate and dull, whereas *P. ramosi* has a shiny pronotum and distinct punctation. Also, the fifth antennomere in *P. serratus* (Fig. 24i) is distinctly pronounced externally at apex whereas in *P. ramosi* (Fig. 24h) it is only slightly expanded. Some small, light specimens of *P. ramosi* are similar to *P. distinctus* but the latter species has long, suberect hairs on the elytra and granulose punctures on the pronotum, both lacking in *P. ramosi*. From other congeners, *P. ramosi* is distinguished by the following combination of characters: the shape and punctation of pronotum (widest at middle, shallow, moderately coarse punctures), the punctation and macular pattern of elytra, the glabrous pronotum and elytra, and the serrate metafemoral tooth.

Specimens examined.—*Type material:* Holotype ♂, "**PUERTO RICO**, Maricao, Rd. 120, Km. 13.8, 26-IV-1980, J. & N. Micheli, col., beating foliage" (USNM). Allotype ♀, "**PUERTO RICO**, Maricao, Rd. 120, Km. 15.9, ex twigs *Eugenia* nr. *ligustrina*, col. 17-X-1981, emerged XII-81, J. Micheli, col." (USNM). 56 paratypes as follows: same data as holotype, 1♀ (JAMC); same except beating dead foliage, 3-V-1980, J. Micheli, 1♂ (JAMC); same except 10-V-1980, 1♂ (JAMC); same except km 15.9, ex twigs *Eugenia* near *ligustrina*, collected 17-X-1981, emerged XI-81, J. Micheli, 3♂

(JAMC, ENPC); same except emerged XII-81, 14♂, 2♀ (JAMC, USNM, ENPC; 2 dissected); same except emerged II-82, 1♂, 1♀ (JAMC); same except III-82, 4♂, 4♀ (JAMC, ENPC; 1 dissected); same except km 15.9, 18-X-1981, beating foliage, J. Micheli, 1♂ (JAMC); same except Water Filtration Plant, 18°09'N, 66°59'W, 17-VI-2002, *Turpenia paniculata*, Steven W. Lingafelter, 1♂ (USNM); same except Bosque Estatal de Maricao, 3.3 km SW Maricao, 18–09–39N, 67–00–05W, forest, 550 m, 10–11-VI-1996, J. Rawlins, C. Young, R. Davidson, W. Zanol, S. Thompson, M. Klingler, 1♀ (CMNH); same except Hwy 120, km 16.2, headquarters Maricao State Forest, 8-VIII-1999, C.W. O'Brien, 1♀ (DHPC); same except K10H2, Maricao For. Res., 26-VII-1979, L.B. O'Brien, 1♀ (JEWC); same except Guánica Forest, ex dead log, 6-IV-2001, Charyn J. Micheli, 1♂ (JAMC); same except Ballena trail, beating, 17°58.49'N, 66°51.74'W, 16-VI-2002, Steven W. Lingafelter, 1♀ (USNM); same except UV light, 27-VII-2004, Nearns & Lingafelter, 1♂ (ENPC); same except Ponce, Rd. 132, km 20, at lights, 26-VI-1972, J. Micheli, 1♂ (JAMC); same except Ponce, dry forest at Holiday Inn, 17°58'N, 66°38'W, 20-VI-2002, beating, Steven W. Lingafelter, 2♂ (USNM, ENPC; 1 dissected); same except 1-VII-2002, *Thouinia portoricensis*, 1♂ (USNM); same except Guanica, Bosque Estatal de Guanica, 3.6 km E Guanica, 17°58.11'N, 66°52.28'W, thornscrub, 100 m, 12-VI-1996, J. Rawlins, R. Davidson, C. Young, M. Klingler, W. Zanol, S. Thompson, 2♂, 2♀ (CMNH); same except 17°56.50'N, 066°51.48'W, Guanica, Bosque Estatal de Guanica, just W Punta Ballena on Rt. 333, beating, 9-VIII-1999, P.W. Kovarik, 1♀ (WIBF); same except Humacao Dist., Casa Cabuy, Hwy. 191 near Florida, MV & UV lights, 31-VII-2-VIII-1999, J.E. Eger, 1♀ (RFMC). **US VIRGIN ISLANDS: St. John**: Lameshur Bay-VIERS, 9-III-1984, at UV light, W.B. Muchmore, 1♀ (WIBF); same except VIERS, UV light, 21–28-VII-1994, M.S. Becker, 1♂, 1♀ (WIBF); same except Est. Caneel Bay, Lind Point, XII-1992, J. Comisky, 1♀ (WIBF). **BRITISH VIRGIN ISLANDS: Guana Island**: Sugarloaf trail, 100–800 ft., 9-X-1994, M.A. & L.L. Ivie, 2♂ (WIBF).

Distribution.—Known from British Virgin Islands (Guana Island), Puerto Rico, and U.S. Virgin Islands (St. John) (West Indies) (Fig. 68).

Remarks.—Micheli & Nearns (2005) stated that specimens exhibited variation in color and slight variation in the shape of pronotal margins, pronotal texture, punctation on pronotum and mesosternum, and proportion and shape of the prosternal process. Specimens collected in the wet forest of Maricao were quite dark and the pale maculae on the elytra tended to be compact (Fig. 24d). Those from the drier areas of Guánica and Ponce (in Puerto Rico) and the Virgin Islands were lighter colored with the pale areas on the elytra more like fasciae (Fig. 24g). Except for color, other variation was slight and there was much overlap. To further investigate the possibility of two distinct species, dissections of male genitalia of several specimens from each phenotype were made by Micheli & Nearns (2005). Detailed study of the tegmen including the parameres (lateral lobes) and phallobase (basal piece) revealed no consistent morphological characters (Fig. 25b). No significant differences were found between specimens from "wet" and "dry" areas, and only a single species was proposed. Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus serratus (Cameron)

(Figs. 21b, 21d, 24i, 32a–c)

Pentomacrus serratus Cameron, 1910: 185.
Plectromerus serratus: Giesbert, 1985: 80.

Diagnosis.—*Plectromerus serratus* is distinguished from congeners by the combination of the following characters: head with vertex microsculptured, sparsely, finely punctate; pronotal disk microsculptured; elytra testaceous, without ferrugineus maculae; and metafemoral teeth strongly, deeply serrate. This species is most similar to *P. giesberti* new species but is distinguished by the pronotal surface with sparse, short, recumbent, pale pubescence (pronotal surface with moderately dense short, recumbent, pale pubescence in *P. giesberti* new species), elytra with faint costae (elytra with distinct costae in *P. giesberti* new species), and the metafemoral teeth with 12–18 serrations peaks (metafemoral teeth with 20–24 serrations peaks in *P. giesberti* new species).

Redescription.—Male (based on holotype). Length 5.4 mm, width 1.2 mm (measured across humeri). Habitus as in Fig. 32a. General form small, narrow, subcylindrical. Integument testaceous.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head nearly flat between antennal

tubercles, which are slightly raised and separated by about the width of two antennal sockets; vertex microsculptured, with a few sparse, fine, shallow punctures; vertex with sparse, short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, about as long as body; scape bowed; third antennomere slightly longer than scape, almost twice as long as fourth; fifth antennomere longest, about twice as long as fourth, slightly longer than third; basal antennomeres subcylindrical; from fifth slightly flattened; apices of antennomeres 5–10 produced externally. Scape with short, pale, recumbent pubescence; antennomeres 2–7 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, slightly broader at apex than base; pronotal sides broadly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin slightly arcuate; basal third of disk with two long, pale, recumbent setae positioned submedially, arising from deep punctures (left seta is broken); lateral margins of pronotum with patch of coarse, deep punctures, with one long, suberect seta anterolaterally. Surface microsculptured, weakly shining, sparsely, faintly, and shallowly punctate, with a slightly raised median callus, and two slightly raised, submedial calli slightly anterior to center (Fig. 32b); surface with sparse, short, recumbent, pale pubescence.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.6 times as long as width at humeri, about 3.5 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides nearly parallel, evenly rounded to apex; elytral apices individually, narrowly rounded; epipleural margin strongly sinuate. Elytral disk shallowly concave medially, subsuturally, creating a faint costa on each elytron; base of each elytron slightly raised. Elytral surface strongly shining; punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair.

Venter with prosternum strongly shining; area in front of procoxae with patch of coarse punctures; narrowest area of prosternal process between procoxae not visible (specimen glued to board); procoxal cavities open behind. Meso- and metasternum surface strongly shining, sparsely and finely punctate, with sparse, short, recumbent, pale pubescence. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen moderately shining, finely, shallowly punctate; abdomen with sparse, long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly rounded, slightly longer than preceding sternite.

Legs with femora pedunculate-clavate; basal portion of metafemoral about as long as metafemoral club; meso- and metafemora moderately arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge strongly serrate, with about 12 serration "peaks"; each serration peak with a short, pale, curved hair; metatibiae strongly sinuate, slightly flattened, about half as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 32c).

Female. Length 6.5 mm; width 1.5 mm (measured across humeri). Similar to male except pronotal sides lacking coarse punctures and prosternum lacking irregular patch of punctures in front of each procoxa. Narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; procoxal cavities open behind. Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite. Metafemoral teeth with posterior edge strongly serrate, with about 18 serration "peaks."

Specimens examined.—*Type material:* Holotype ♂ (Fig. 32a), **HAITI** [no label data] (BMNH).

Other material: **DOMINICAN REPUBLIC: La Vega Province**: 9 km NE Jarabacoa, 2000 ft., 8–12-V-1985, E. Giesbert, 1 ♀ (EFGC).

Distribution.—Known from Port au Prince, Haiti; and La Vega Province, Dominican Republic (Greater Antilles) (Fig. 67).

Remarks.—Cameron (1910) stated that the holotype was collected "sweeping near Port au Prince, Haiti, in February, 1908" but the holotype specimen does not bear this information. This

species is rarely collected and nothing is known about its biology.

***Plectromerus tertiarius* Vitali †**
(Figs. 18b, 20a, 20c)

Plectromerus tertiarius Vitali, 2004: 435.

Diagnosis.—Ventral habitus as in Fig. 18b (dorsal habitus completely obscured), length approximately 7 mm (exact measurement not possible since abdomen is bent up through open elytra), included in a piece of Dominican amber (Lower Miocene) from the Dominican Republic. Amber yellow-brownish, partially obscured by numerous, small bubbles; cut and polished in a near-oval shape, measuring 42 × 22 × 15 mm. The specimen is damaged as follows: metathoracic legs are missing except coxae and trochanters; left antenna is damaged, missing part of antennomere 8, completely missing antennomeres 9–11. One important character in particular, the prosternal process between coxae, is not visible due to position of pro- and mesothoracic legs. Elytral punctation can be inferred from ventral view due to open elytra which are semi-translucent.

Specimens examined.—Holotype ♂ (Fig. 18b), "**DOMINICAN REPUBLIC**, Lower Miocene (25–20.000.000 BP), ex. col. Y.R. Goldman" (FVPC).

Distribution.—Known only from Dominican amber fossils, Dominican Republic (Greater Antilles) (Fig. 68).

Remarks.—Vitali (2004) stated that the holotype is a male, however, Nearns & Branham (2005) noted that the broadly rounded fifth abdominal segment is more indicative of a female *Plectromerus* (irregular patches of coarse punctures in front of each prosternal coxa are also not visible but the view is partially obscured). Vitali (2004) also states that the first abdominal ventrite is 3 times longer than other visible ventrites, however, measurements show it to be about 2 times longer (Nearns & Branham 2005). Additional comments on this species based on a second specimen are provided by Vitali (2006).

***Plectromerus thomasi* Nearns & Branham, new species**
(Figs. 33a–c)

Diagnosis.—This species is distinctive from known congeners and can easily be distinguished by the combination of the following characters: third antennomere only slightly longer than fourth; pronotal disk with dark reddish-brown to black maculae and with strongly raised calli; and metafemoral club small, with tooth weakly serrate.

Description.—Holotype, female. Length 8.5 mm, width 2.1 mm (measured across humeri). Habitus as in Fig. 33a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head, pronotum, and femoral apices ferrugineus; pronotum with dark reddish-brown to black maculae; each elytron testaceous with two large, irregular, ferrugineus macular regions, one at basal third, the other at apical third, elytral apices testaceous.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head moderately concave between antennal tubercles, which are somewhat raised and separated by the width of about 2.5 antennal sockets; vertex microsculptured, with moderately dense, shallow punctures; vertex with short, recumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with shallow indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere about as long as scape, only slightly longer than fourth; fifth antennomere longest, almost twice as long as fourth, about 1.3 times longer than third; antennomeres 6–10 becoming progressively shorter; eleventh slightly longer than tenth; basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 6–10 produced externally. Scape microsculptured with dense, shallow punctation; antennomeres 2–7 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at base, broader at base than apex; pronotal sides nearly parallel, slightly constricted at basal third, with a slight inflation just before apex; disk convex, with one strongly raised, median callus at about the center; disk with two strongly raised, submedial calli slightly anterior to center, and two moderately raised, submedial calli slightly posterior to center. Basal third of disk with one long, pale, suberect seta positioned submedially on each side, arising from a deep puncture (setae broken off); lateral margins of pronotum without patch of coarse, deep punctures; lateral margins with one slightly raised cal-

lus just anterior to middle; pronotum with two or three long, suberect setae anterolaterally. Surface strongly shining, microsculptured, with sparse, shallow punctation.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra about 2.8 times as long as width at humeri, about 3.5 times as long as pronotal length, about 1.7 times broader basally than pronotum at widest point (at base); elytral sides nearly parallel, slightly sinuate around middle, evenly rounded to apex; elytral apices individually, evenly rounded; epipleural margin slightly sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each elytron slightly raised. Elytral surface shining; punctation moderately dense, coarse, and deep at basal two-thirds; elytral punctures becoming finer towards apex and sides; each puncture with a short, fine, pale hair; elytra with scattered, long, suberect, pale hairs.

Venter with prosternum strongly shining; with sparsely and finely punctate, short, pale pubescence; narrowest area of prosternal process between procoxae about 0.3 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous; procoxal cavities open behind (Fig. 33b). Meso- and metasternum surface strongly shining, sparsely and finely punctate. Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining, finely, shallowly punctate; abdomen with few long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly rounded, slightly longer than preceding sternite.

Legs with femora pedunculate-clavate; basal portion distinctly longer than metafemoral club; meso- and metafemora slightly arcuate, shining, clothed with sparsely to moderately densely, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge nearly smooth; metatibiae slightly sinuate, slightly flattened, about 0.7 as long as metafemora, gradually expanded distally; metatibiae clothed with moderately dense, fine, recumbent, pale pubescence distally (Fig. 33c).

Etymology.—This distinctive species is named for Michael C. Thomas with appreciation for his friendship, encouragement, and inspiration. Michael has collected extensively in the Caribbean and has contributed greatly to our knowledge of Cerambycidae. The epithet is a noun in apposition.

Specimens examined.—Type material. Holotype ♀ (Fig. 33a), "**HAITI**, Morne Guimy, 22km., SE Fond Verrettes, 19 Jul 1956, 6500′ B.&B. Valentine, Foret des Pins, Hardwood cloud forest, beating" (WIBF, to be deposited at USNM).

Distribution.—Known only from Morne Guimy, Haiti (Greater Antilles) (Fig. 71).

Remarks.—This species is described from a single female specimen collected beating at approximately 1980 m elevation. The holotype described herein represents the only known specimen and nothing is known about the biology of this species. Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus turnbowi Nearns & Branham, new species
(Figs. 34a–d)

Diagnosis.—From congeners, *P. turnbowi* is separated by the combination of the following characters: scape with shallow to moderately deep depression dorsally; pronotal disk with slightly to moderately raised calli; metafemora gradually clavate; and metafemoral teeth weakly serrate. This species is most similar to *P. fasciatus* in several characters including antennal segment proportions, gradually clavate metafemora, and weakly serrate metafemoral teeth. However, *Plectromerus turnbowi* differs in having the pronotum with dense, moderately deep, somewhat evenly spaced punctation (pronotum with dense, confluent, shallow punctation in *P. fasciatus*), and elytral apices with few long, pale, suberect setae (elytra with scattered to moderately dense, long, pale, suberect, setae in *P. fasciatus*).

Description.—Male. Length 8.5–10.2 mm, width 1.9–2.4 mm (measured across humeri). Habitus as in Fig. 34a. General form small, narrow, subcylindrical. Integument testaceous, with portions of head, antennae, and elytra ferrugineus.

Head with front nearly flat, transverse, with a median, shallow line from between eyes to just beyond vertex; head shallowly concave between antennal tubercles, which are slightly raised and separated by the width of about two antennal sockets; vertex lightly microsculptured, with scattered, moderately deep punctures; vertex with short, re-

cumbent, pale pubescence. Eyes coarsely-faceted, transverse, subreniform, with moderately deep indentations around antennal insertions.

Antennae eleven segmented, slightly longer than body; scape bowed; third antennomere about as long as scape, more than twice as long as fourth; fifth antennomere longest, more than 3 times longer than fourth; basal antennomeres subcylindrical, from fifth slightly flattened; apices of antennomeres 5–10 produced externally. Scape with short, pale, recumbent pubescence, with shallow to moderately deep depression dorsally (Fig. 34d); antennomeres 2–7 ciliate beneath with coarse, moderately long, suberect, pale hairs.

Pronotum subcylindrical, about 1.3 times as long as wide, widest at middle, slightly wider at base than at apex; pronotal sides broadly inflated, arcuately constricted at basal third, with a slight inflation just before apex; basal margin slightly arcuate; disk convex, somewhat flattened, with one slightly raised, median callus immediately posterior to center, about as long as the fourth antennomere; disk with two moderately raised, submedial calli slightly anterior to center, and two smaller slightly raised, submedial calli slightly posterior to center; basal third of disk with one long, pale, recumbent or suberect seta positioned submedially, arising from deep punctures; lateral margins of pronotum with patch of coarse, deep punctures, and one or two long, suberect setae anterolaterally. Surface opaque, microsculptured, moderately shining, with dense, moderately deep, somewhat evenly spaced punctation.

Scutellum small, rounded, almost as long as broad, impunctate.

Elytra nearly 3 times as long as width at humeri, about 3 times as long as pronotal length, about 1.3 times broader basally than pronotum at widest point (at middle); elytral sides nearly parallel, slightly sinuate, evenly rounded to apex; elytral apices individually rounded to weakly subtruncate; epipleural margin moderately sinuate. Elytral disk slightly concave medially, subsuturally, creating a faint costa on each elytron; base of each slightly raised. Elytral surface moderately shining; punctation moderately dense, coarse, and deep at basal third; punctures becoming finer towards apex and sides, almost obsolete at apical third; each puncture with a short, fine, pale hair; elytral apices with few long, pale, suberect hair.

Venter with prosternum strongly shining; with scattered, coarse, deep punctation, one irregular patch of 2–3 coarse, deep punctures in front of each procoxa; narrowest area of prosternal process between procoxae about 0.2 times as wide as procoxal cavity, and about 0.5 times the width of apex of process which is subtriangular with rounded corners; prosternal process between procoxae gradually declivous, procoxal cavities open behind. Mesosternum surface strongly shining, sparsely punctate with coarse, deep punctures. Metasternum surface strongly shining, with moderately dense, deep punctures, with a few suberect, pale hairs interspersed (Fig. 34c). Metepisternum sparsely clothed with short, recumbent, pale pubescence, which is denser posteriorly. Abdomen strongly shining; finely, shallowly punctate, with scattered coarse punctures; abdomen with sparse long, suberect, pale hairs and punctures each with a short, fine, pale hair; fifth sternite broadly subtruncate, slightly longer than preceding sternite.

Legs with femora gradually clavate; metafemoral club slightly longer than base; meso- and metafemora slightly arcuate, shining, clothed with sparse, recumbent, short, pale pubescence; underside of each femoral club with a broad, acute triangular tooth; metafemoral teeth with posterior edge weakly serrate, with indistinct and irregular serration "peaks"; each peak with a short, curved, pale hair; metatibiae nearly straight, slightly sinuate, slightly flattened, about as long as metafemora; metatibiae gradually expanded distally; clothed with moderately dense, fine, recumbent, pale pubescence, becoming longer and coarser distally (Fig. 34b).

Female. Length 7.4–10.2 mm; width 1.8–2.4 mm (measured across humeri). Similar to male except pronotal sides lacking patch of deep, coarse punctures and prosternum lacking irregular patch of punctures in front of each procoxa. Abdomen with terminal sternite evenly, broadly rounded, slightly longer than preceding sternite.

Etymology.—We are pleased to name this species for Robert H. Turnbow, Jr. for his many contributions to the study of cerambycids and who collected part of the type series. The epithet is a noun in apposition.

Specimens examined.—*Type material:* Holotype ♂ (Fig. 34a), "**DOMINICAN REPUBLIC: PEDERNALES**, PN Sierra de Bahoruco, Las Abejas, 1150 m at tree fall, E.H. Nearns & S.W. Lingafelter 18-VI-2005" (USNM). Allotype ♀, "**DOMINICAN REPUBLIC**: Independencia, Sierra de Bahoruco,

north slope, 13.5 km SE Puerto Escondido, 18–12–18N, 71–31–08W, 1789 m. 24–26 Mar 2004, R. Davidson, J. Rawlins, C. Young, C. Nuñez, M. Rial, ecotonal *Pinus* grassland, malaise trap, Sample 41183" (CMNH). 7 paratypes as follows: **DOMINICAN REPUBLIC: Pedernales Province:** Las Abejas, 38 km NNW Cabo Rojo, 18°09'N, 71°38'W, 1160 m, 13-VII-1987, J. Rawlins, R. Davidson, 1♂, 2♀ (CMNH); same except Parque Nacional Sierra de Baoruco, Las Abejas, 18°09.011'N, 71°37.342'W, 1150 m, at blacklight, 18-VI-2005, S. Lingafelter, 1♂ (USNM); same except 1240 m, 18°09.023'N, 71°37.387'W, 9-VIII-1999, 2♀ (WIBF); Payaso, 13-VII-1996, R. Turnbow, 1♂ (RHTC).

Distribution.—Known from Barahona and Pedernales Provinces, Dominican Republic (Greater Antilles) (Fig. 68).

Remarks.—This species is described from nine specimens, several of which were collected between 1150–1789 m elevation. The type series described herein represent the only known specimens and nothing is known about the biology of this species. Lingafelter *et al.* (2007) provided a color habitus photograph of the holotype.

Plectromerus unidentatus Fisher
(Figs. 35a–c)

Plectromerus unidentatus Fisher, 1942: 17.

Diagnosis.—*Plectromerus unidentatus* is most similar to *P. wappesi* but is distinguished by the weakly, irregularly serrate metafemoral teeth (Fig. 35b) (moderately, evenly serrate metafemoral teeth in *P. wappesi*), elytral punctures somewhat elongate and evenly spaced (elytral punctures rounded, not evenly spaced in *P. wappesi*), and scape, pronotal disk, and metafemora without long, suberect setae (scape, pronotal disk, and metafemora with long, suberect setae in *P. wappesi*).

Specimens examined.—**JAMAICA: Kingston Parish:** Kingston, at light, 16-VI-1958, M.W. Sanderson, 1♂ (WIBF). **Manchester Parish:** Mandeville, A.E.Wight, 1♀ [paratype] (USNM). **Portland Parish:** Hardwar Gap, 4000 ft., 21-VII-1966, A.T. Howden, 2♂ (WIBF). **Saint Catherine Parish:** Mt. Diablo, Hollymount, 2754 ft., 21–24-IV-73, Don & Mignon Davis, 1♂, 1♀ (USNM). **Saint Elizabeth Parish:** Balaclava, 24–27-III-1937, M. Savariau, 1♀ (USNM). **Saint James Parish:** Spring Garden, westlich Montego Bay, LF 100 m, 8–20-III-2002, L. Rezbanyai-Reser, 3 specimens [gender undetermined] (JAMC). **Trelawny Parish:** Barbecue Bottom, 10-VIII-1966, A.T. Howden, 1♂ (WIBF).

Distribution.—Known from Kingston, Manchester, Portland, Saint Catherine, Saint Elizabeth, Saint James, and Trelawny Parishes, Jamaica (Greater Antilles) (Fig. 71).

Remarks.—This species is endemic to Jamaica and has been collected at lights. Nothing else is known about the biology of this species. Males specimens measured: length 5.4–7.4 mm, width 1.3–1.5 mm (measured across humeri), female specimens measured: length 6.3–7.4 mm, width 1.4–1.7 mm (measured across humeri). Unfortunately, the holotype of this species was unavailable for study from the MCZ. Fisher (1942) did not report the gender of the holotype, but stated that it measures: length 7.0 mm, width 1.6 mm, and was described from five specimens collected by A.E. Wight, at the type locality: Jamaica, Manchester Parish, Mandeville (MCZ).

Plectromerus wappesi Giesbert
(Figs. 28c, 28i, 36a–c)

Plectromerus wappesi Giesbert, 1985: 81.

Diagnosis.—This species is similar to *P. michelii* new species in several characters including antennal segment proportions, pronotal disk punctation, shape of elytral apices, and metafemoral and metatibial shape. However, *P. wappesi* is distinguished from *P. michelii* by the moderately, evenly serrate metafemoral teeth (weakly, irregularly serrate metafemoral teeth in *P. michelii* new species), and scape, pronotal disk, and metafemora with long, suberect setae (scape, pronotal disk, and metafemora without long, suberect setae in *P. michelii* new species).

Specimens examined.—**HONDURAS:** intercepted under bark of unidentified wood at Mobile, Alabama, from Honduras, 19-XII-1939, 1♀ (USNM). **JAMAICA: Clarendon Parish:** Portland Ridge, near Jackson Bay Cave, 40 ft., 4-V-1973, Don & Mignon Davis, 1♂ (USNM). **Trelawny Parish,** Duncans, 9-VIII-1966, A.T. Howden, collected at light, 1♀ (WIBF); W.I., C.M.Acc.2522, Rae Town, 16-VII-99, 1♀ (CMNH). **Kingston Parish:** Kingston, Tip Top Hotel, Ruthven Rd., R.E. Woodruff, 7-V-69, blacklight trap, 2♂ (WIBF, on

loan from FSCA). **Saint James Parish**: Spring Garden, westlich Montego Bay, 8–20-III-2002 LF 100 m, L. Rezbanyai-Reser, 3 specimens [gender undetermined] (JAMC). **MEXICO: Quintana Roo:** 15–18 km N Tulum, 11–12- X-1982, J.E. Wappes, 4♂, 4♀ [paratypes] (EFGC, FSCA, JEWC, USNM, RFTC); same except 10 km N Puerto Morelos, 15–16-VI-1983, E. Giesbert, 4♂ [paratypes] (EFGC); same except 15 km W Puerto Morelos, 12–18-VI-1993, 1♂ (EFGC); same except 14 miles NE Tulum, 8-VIII-1974, C.W. & L. O'Brien & Marshall, 1♂ (TAMU); same except Cancun, Moon Palace, ex. Buttonwood girdles, emerged 25-V-02, R. Morris, 1♂, 1♀ (ENPC).

Distribution.—Known from Honduras, **new country record** (Central America); Jamaica, **new country record** (Greater Antilles); and Quintana Roo, Mexico (Fig. 67).

Remarks.—Giesbert (1985) stated that this species was collected beating dead branches. It has also been collected at lights and reared from buttonwood (*Conocarpus erectus* L. (Combretaceae)) girdles (R.F. Morris II, pers. comm.). Giesbert (1985) also commented on the variability of the elytral markings, stating that "... in a number of specimens the two dark fasciae are reduced to four indistinct ferruginous spots" and that "... in the Cozumel specimen, the markings are darker and more distinct" (Giesbert 1985: 81).

The holotype is a male specimen, type locality: Mexico, Quintana Roo, 10 km N Puerto Morelos, 15–16-VI-1983 (EMEC).

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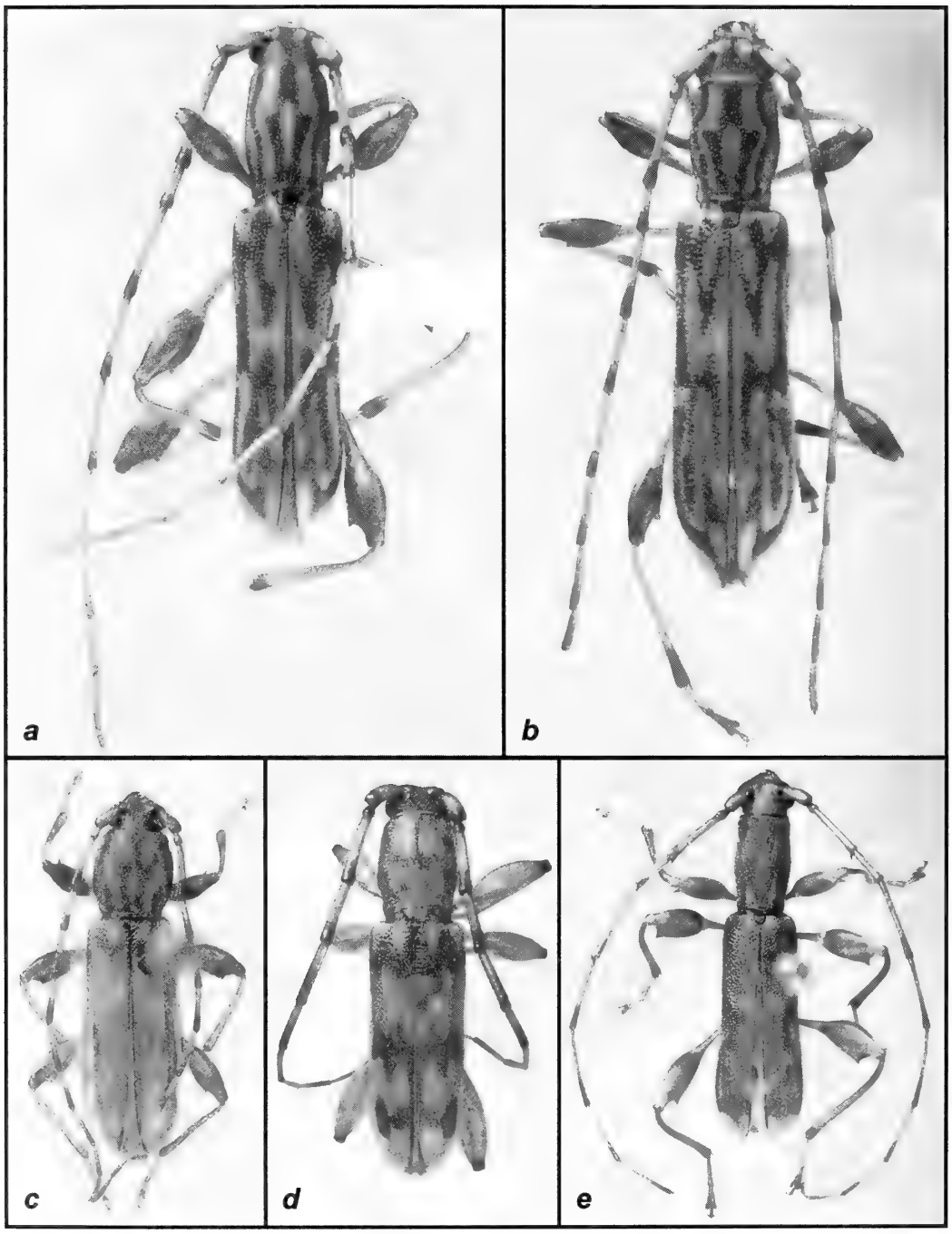

Fig. 1. Four species of *Curius*. a, *Curius chemsaki* Nearns & Ray, holotype male, dorsal habitus. b, *Curius chemsaki* Nearns & Ray, allotype female, dorsal habitus. c, *Curius dentatus* Newman, male, dorsal habitus. d, *Curius punctatus* (Fisher), holotype male, dorsal habitus. e, *Curius panamensis* Bates, male, dorsal habitus.

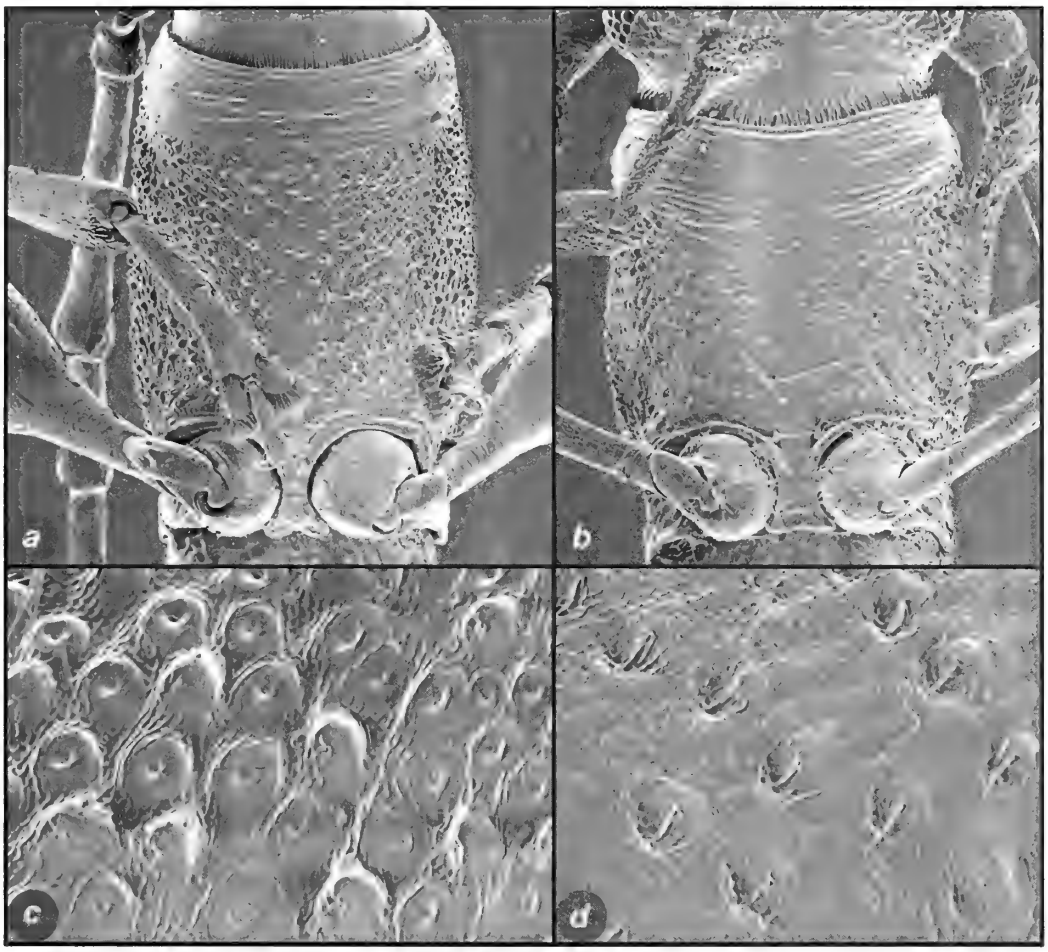

Fig. 2. *Curius chemsaki* Nearns & Ray. a, holotype male, closeup of prosternum. b, allotype female, closeup of prosternum. c, holotype male, prosternal gland pores (430× magnification). d, allotype female, prosternal punctation (400× magnification).

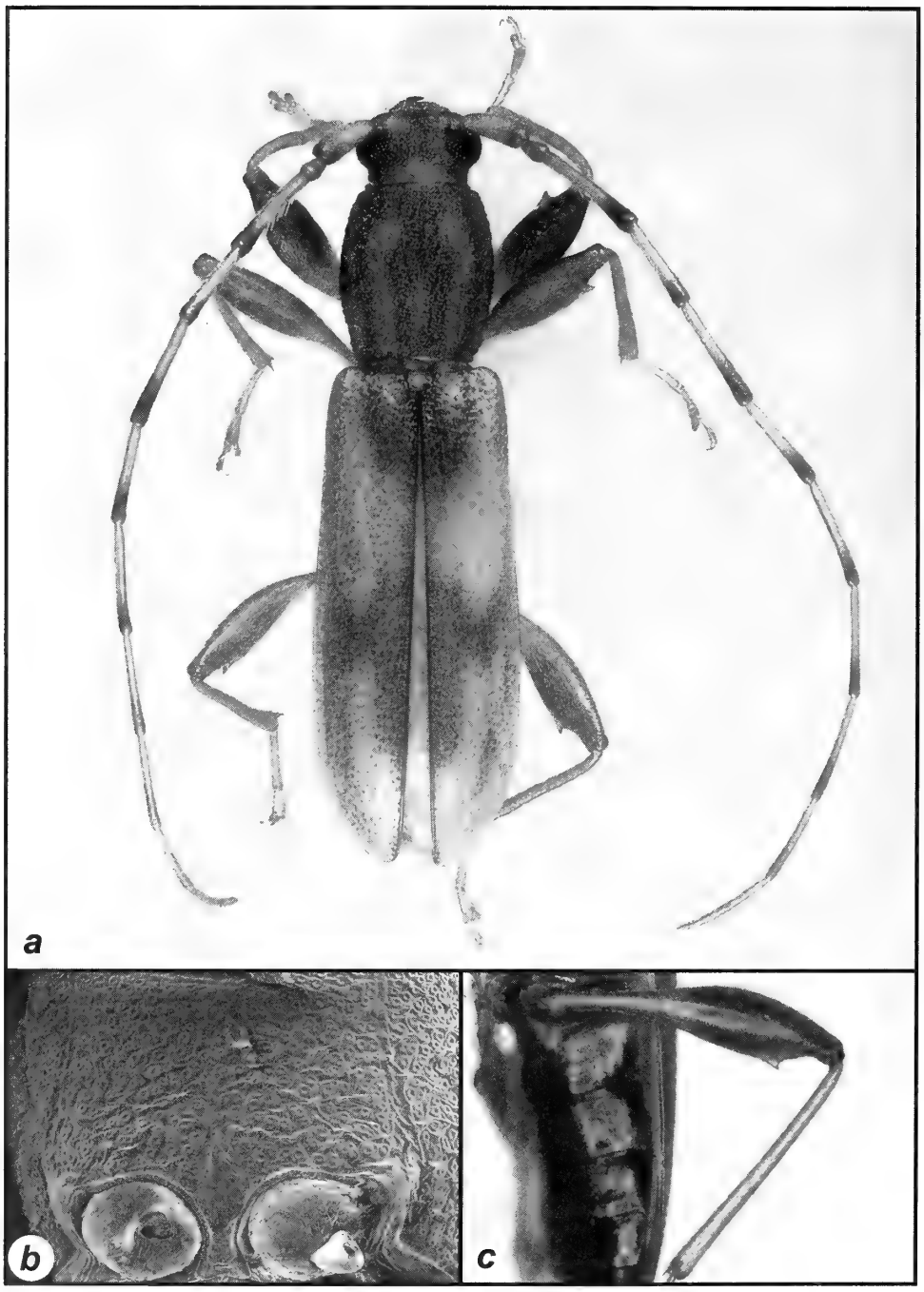

Fig. 3. *Curius dentatus* Newman, male. a, dorsal habitus. b, closeup of prosternum (125× magnification). c, closeup of metafemur and metatibia, ventral view.

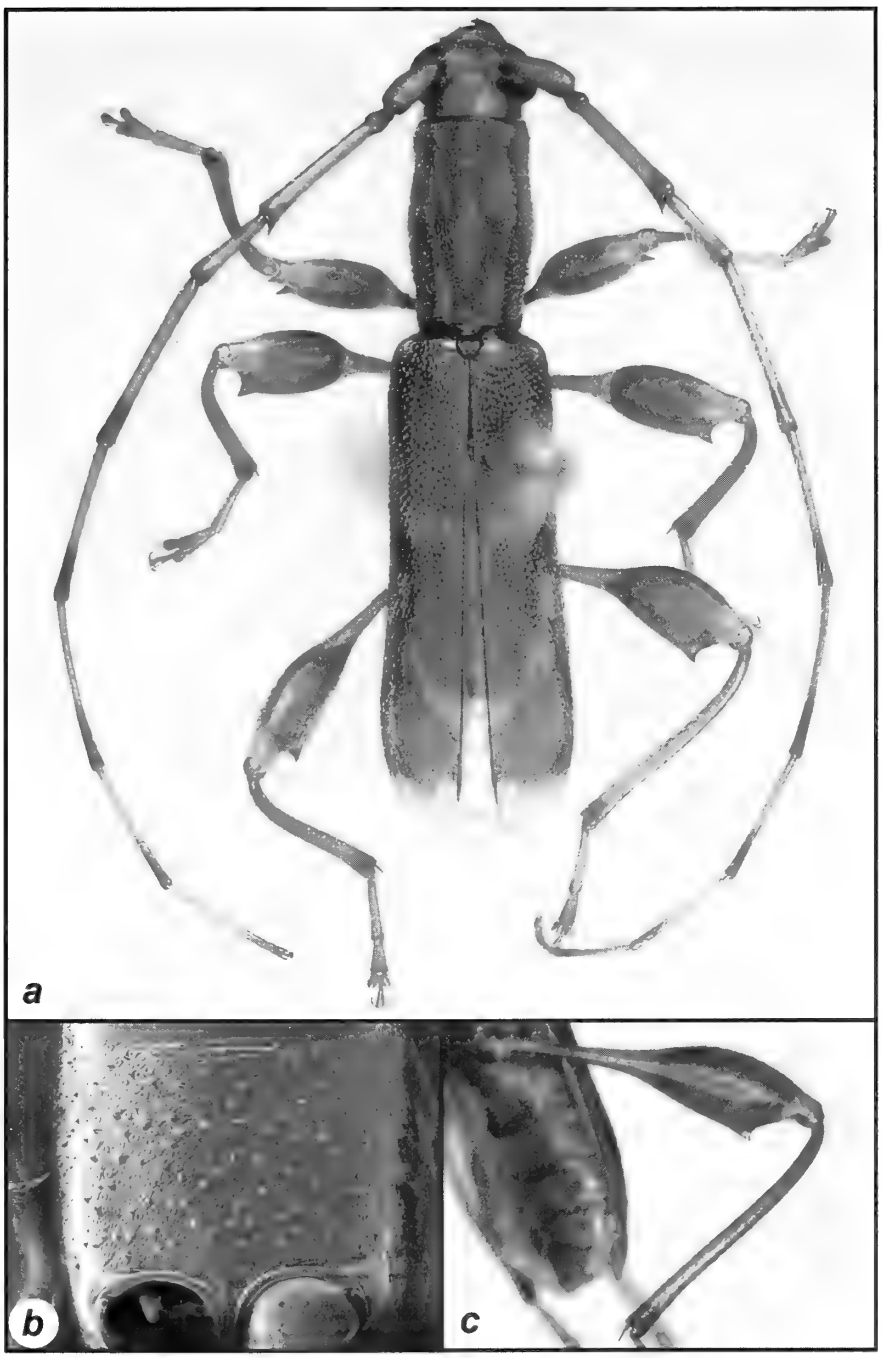

Fig. 4. *Curius panamensis* Bates, male. a, dorsal habitus. b, closeup of prosternum (84× magnification). c, closeup of metafemur and metatibia, ventral view.

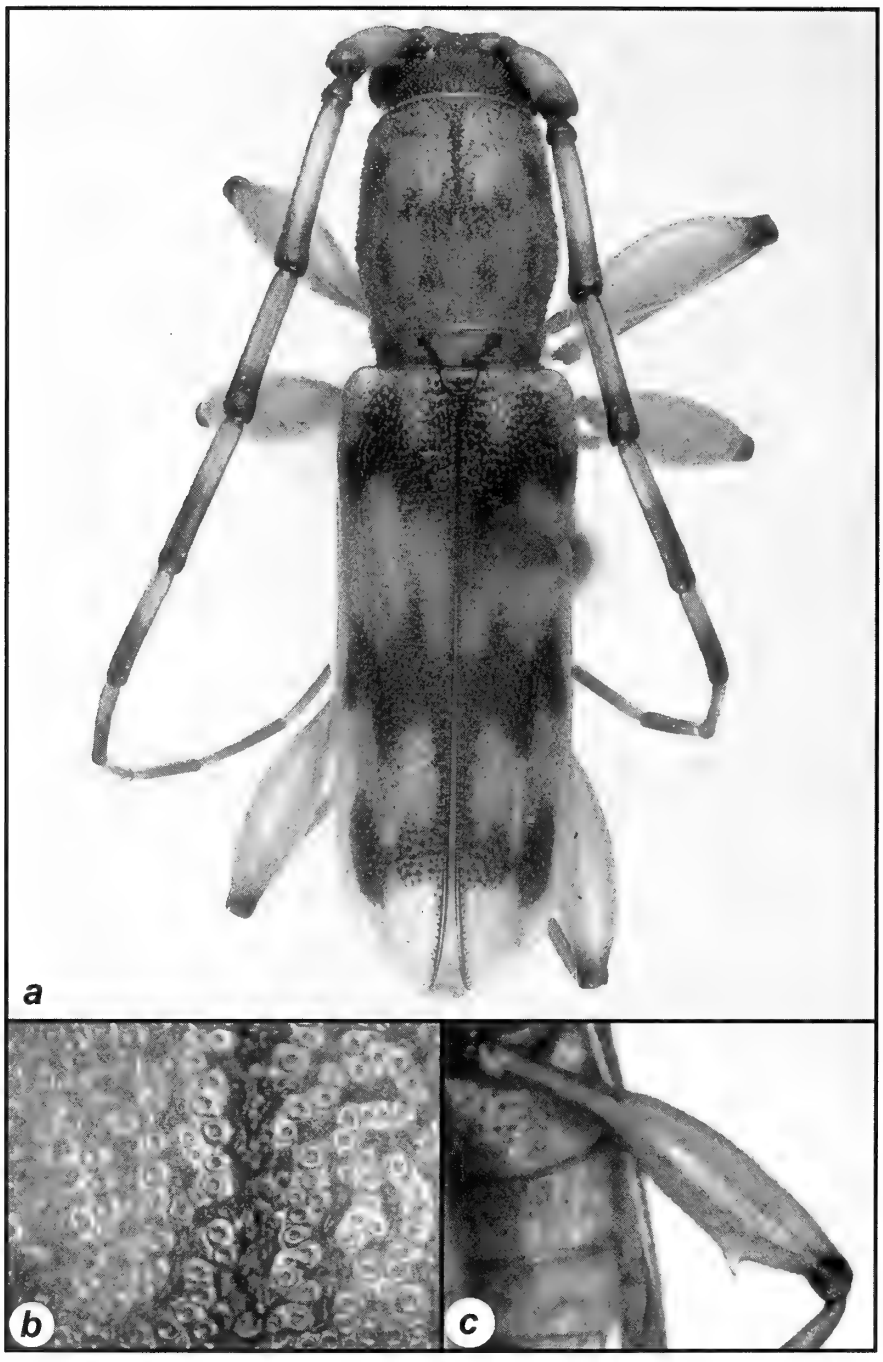

Fig. 5. *Curius punctatus* (Fisher). a, holotype male, dorsal habitus. b, holotype male, closeup of pronotum. c, male, closeup of metafemur, ventral view.

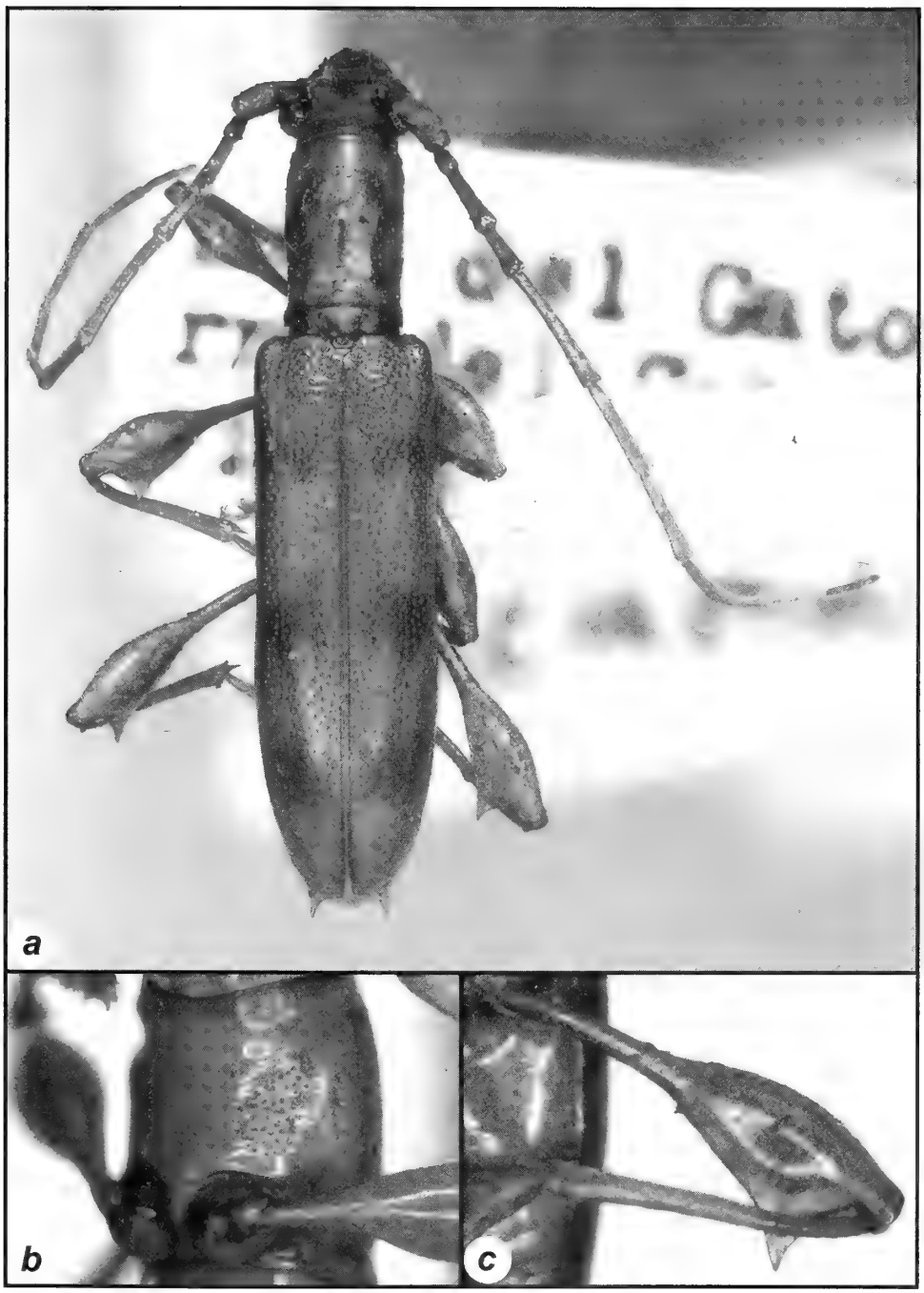

Fig. 6. *Plectromerus acunai* (Fisher). a, holotype female, dorsal habitus. b, male, closeup of prosternum. c, holotype female, closeup of metafemur and metatibia, ventral view.

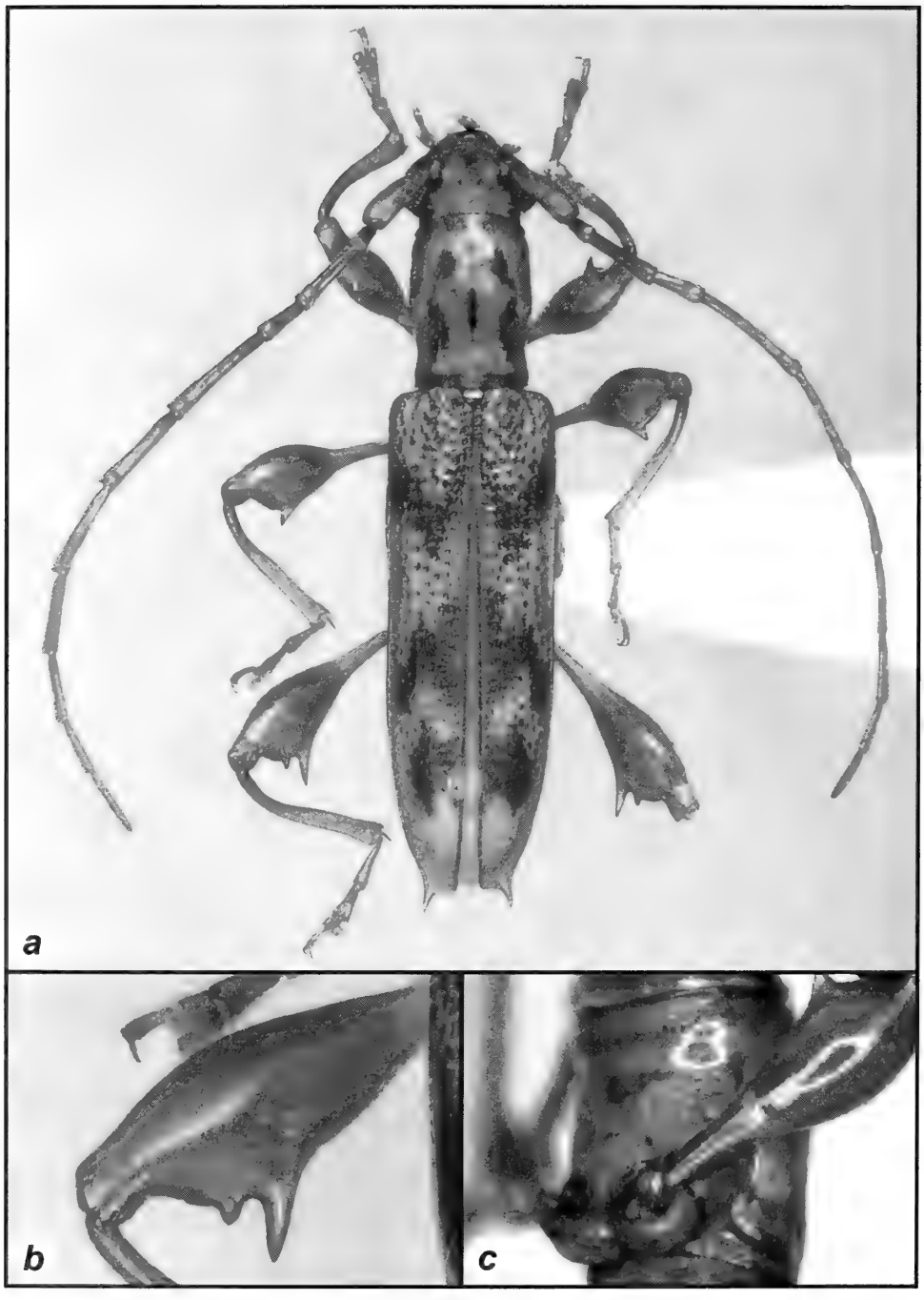

Fig. 7. *Plectromerus bidentatus* Fisher, male. a, dorsal habitus. b, closeup of metafemur, ventral view. c, closeup of prosternum.

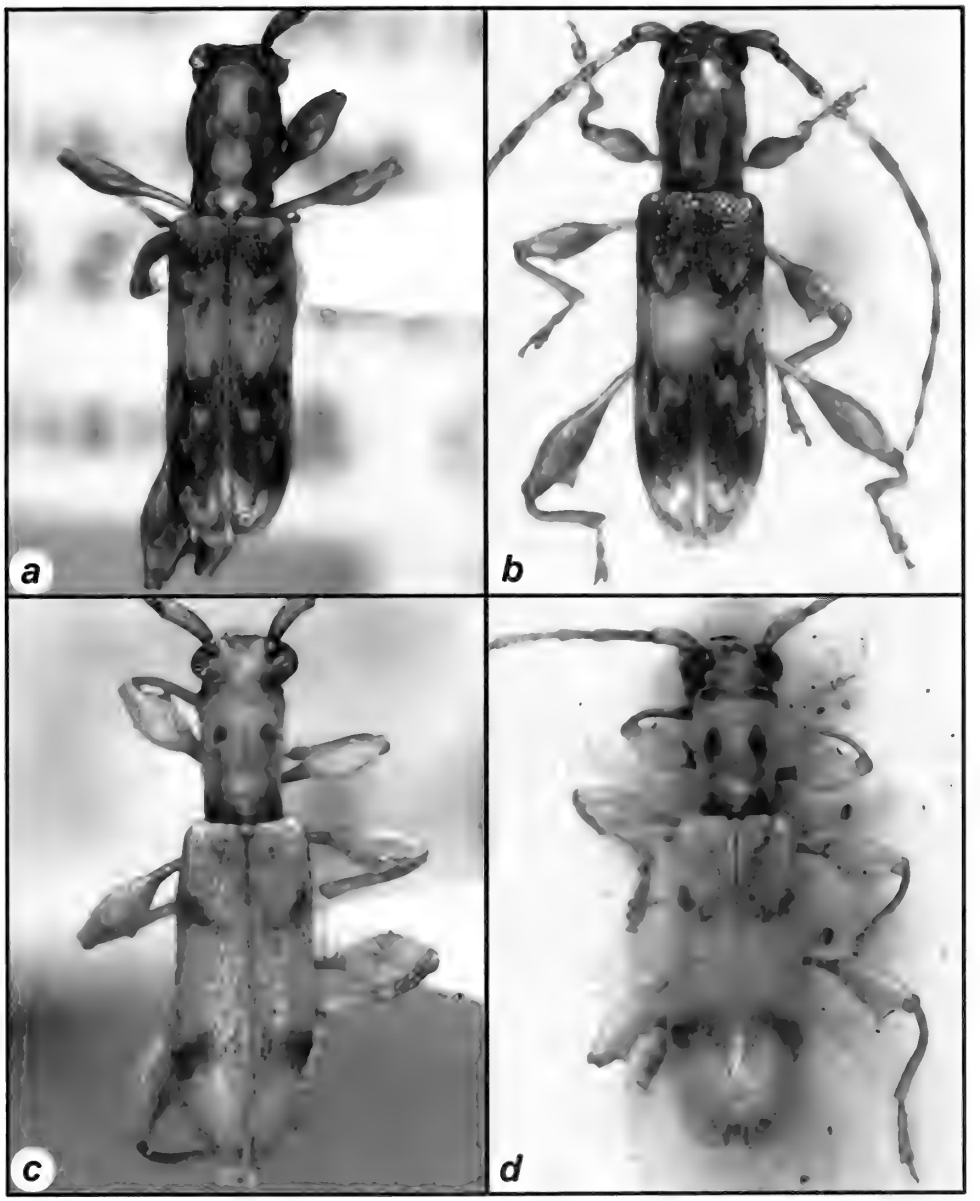

Fig. 8. Three species of *Plectromerus*. a, *Plectromerus costatus* Cazier & Lacey (= *P. dentipes* (Olivier)) holotype male, dorsal habitus. b, *Plectromerus dentipes* (Olivier), female, dorsal habitus. c, *Plectromerus crenulatus* Cazier, holotype female, dorsal habitus. d, *Plectromerus distinctus* (Cameron), holotype female, dorsal habitus.

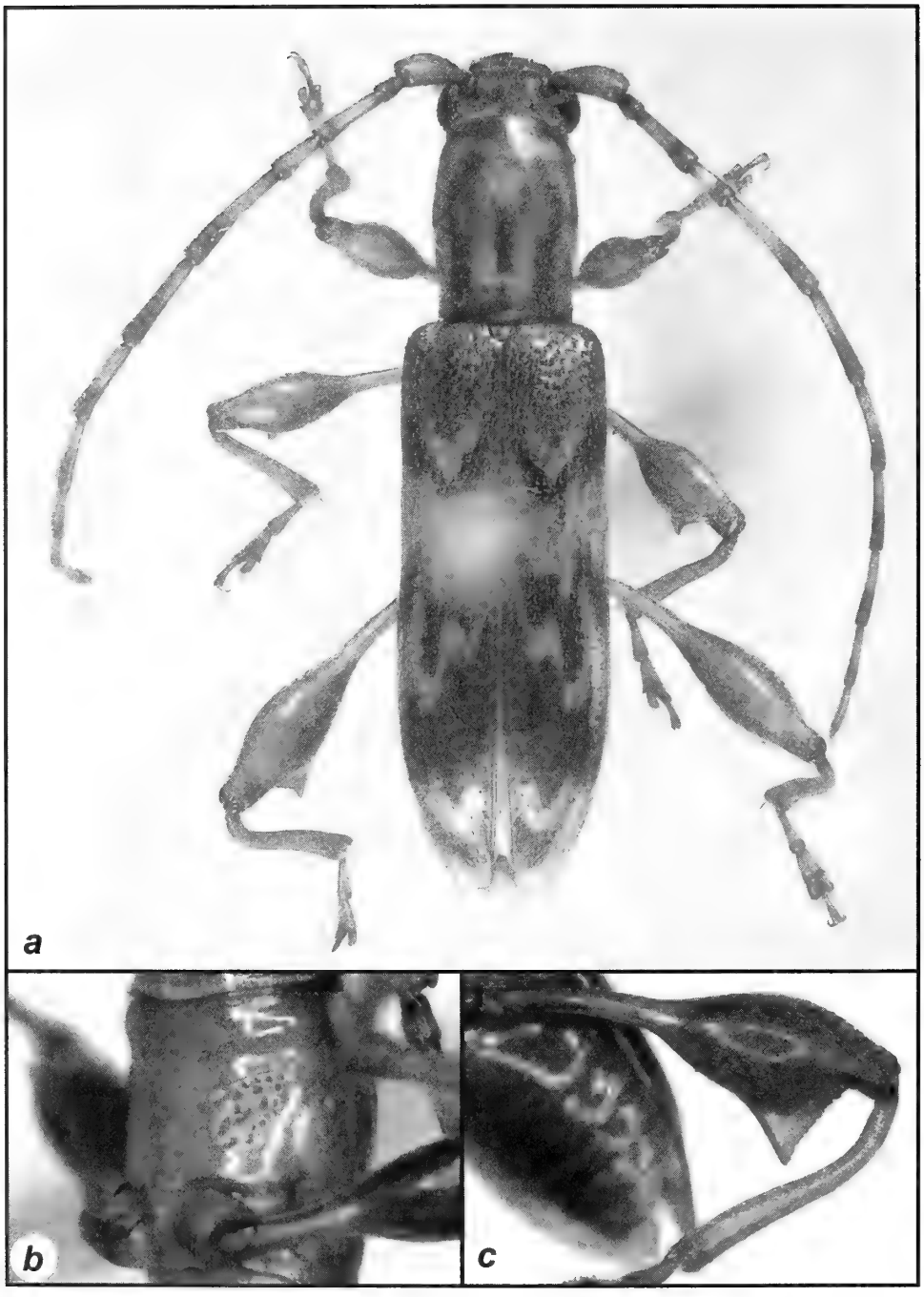

Fig. 9. *Plectromerus dentipes* (Olivier), male. a, dorsal habitus. b, closeup of prosternum. c, closeup of metafemur and metatibia, ventral view.

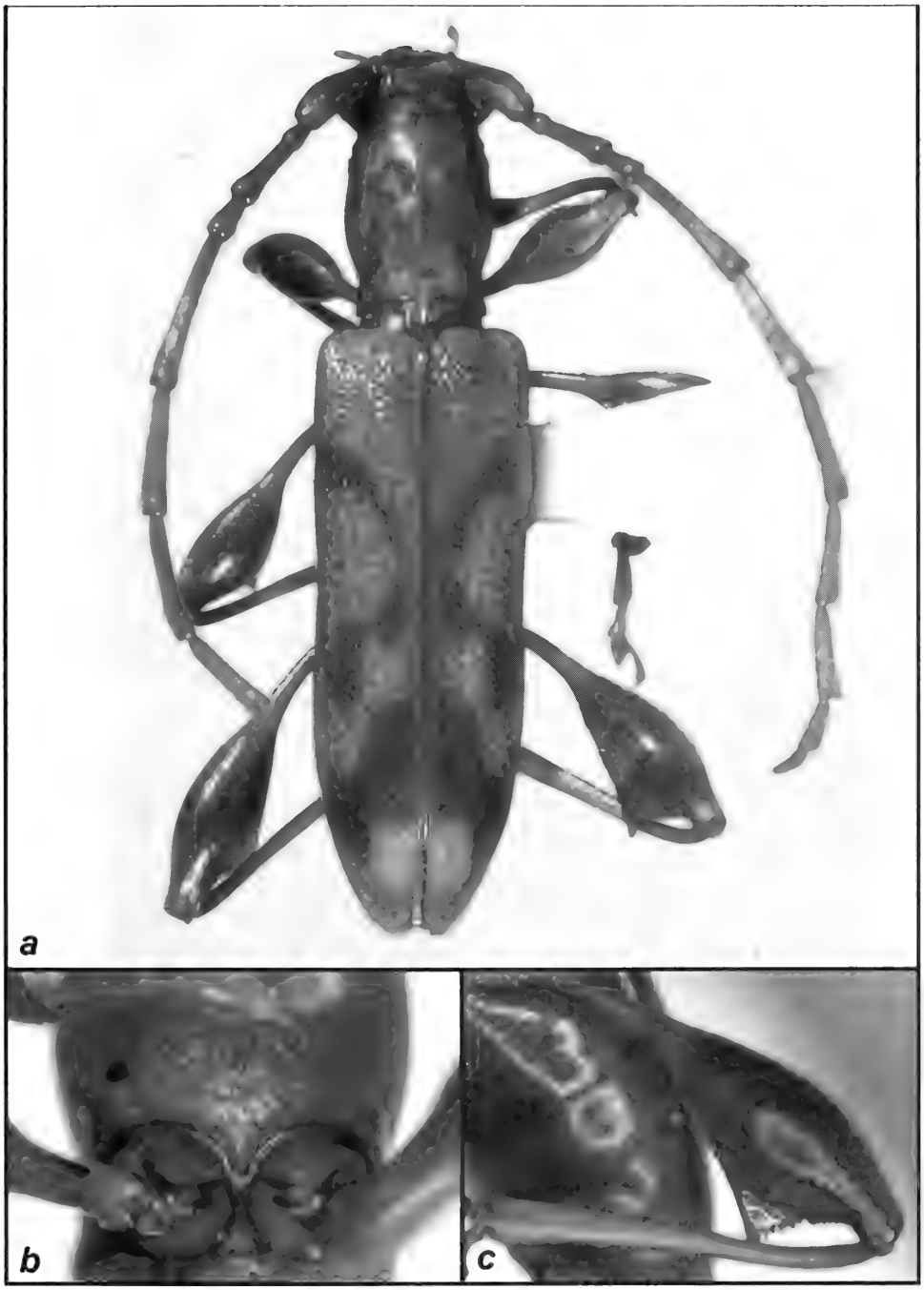

Fig. 10. *Plectromerus dezayasi*, new species, holotype male. a, dorsal habitus. b, closeup of prosternum. c, closeup of metafemur and metatibia, ventral view.

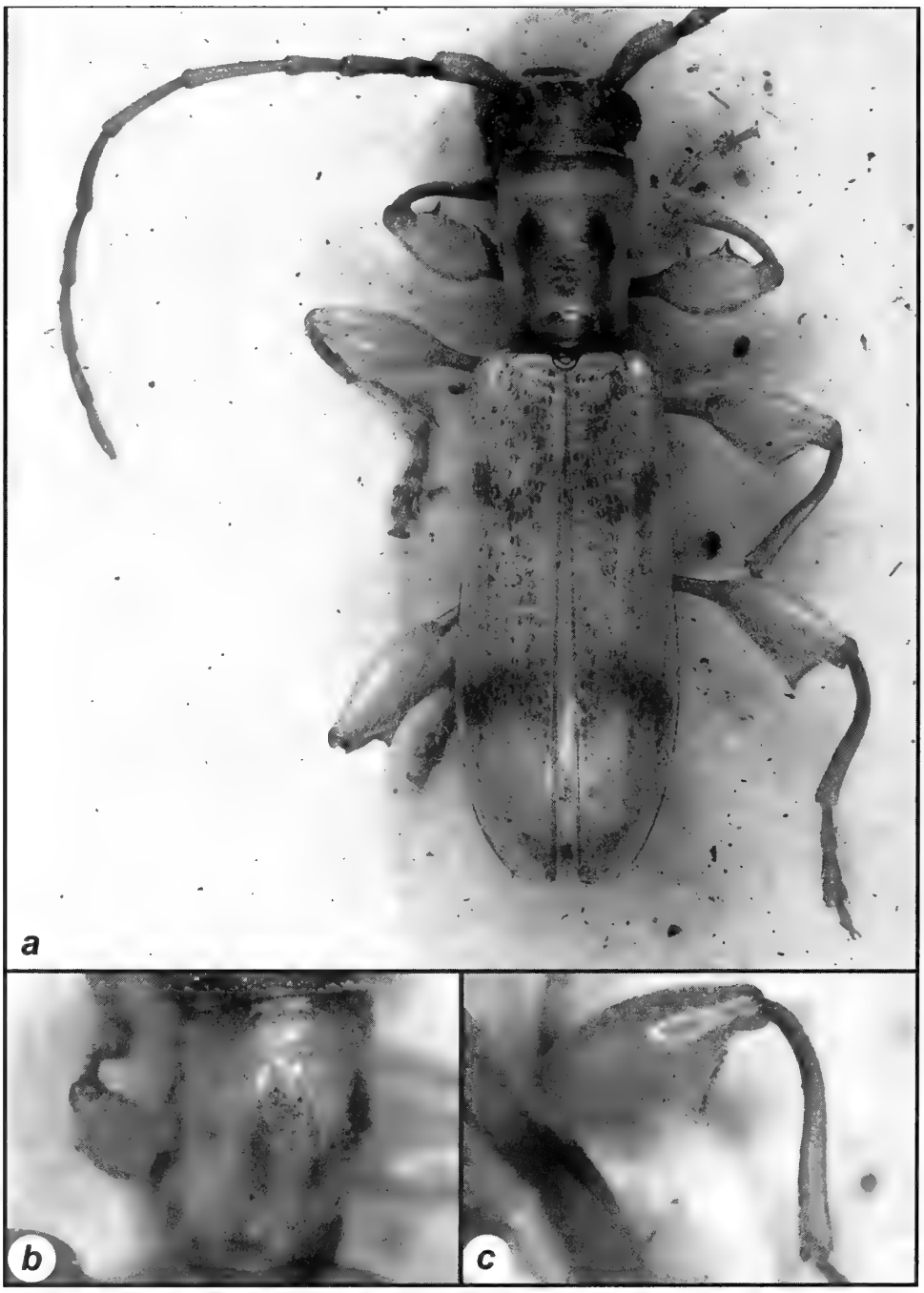

Fig. 11. *Plectromerus distinctus* (Cameron), holotype female. a, dorsal habitus. b, closeup of pronotum, dorsal view. c, closeup of metafemur and metatibia, dorsal view.

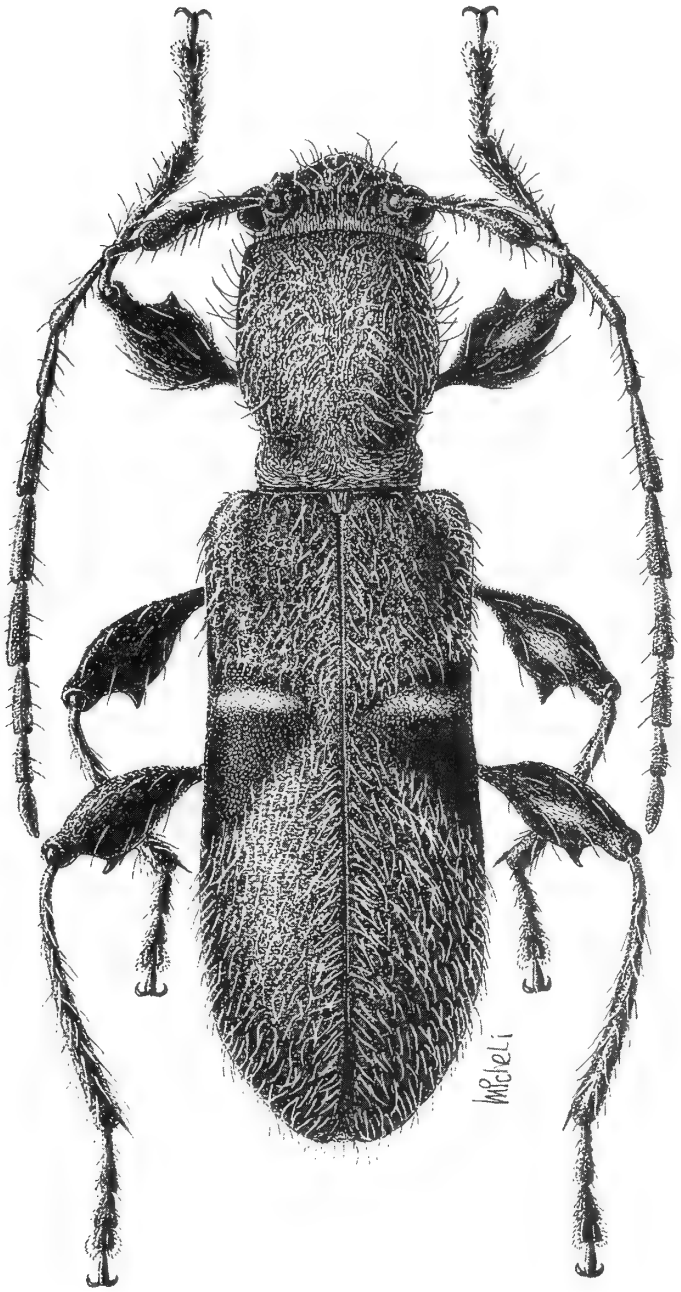

Fig. 12. *Plectromerus dominicanus* (Micheli), dorsal habitus, illustration by Julio Micheli (1983).

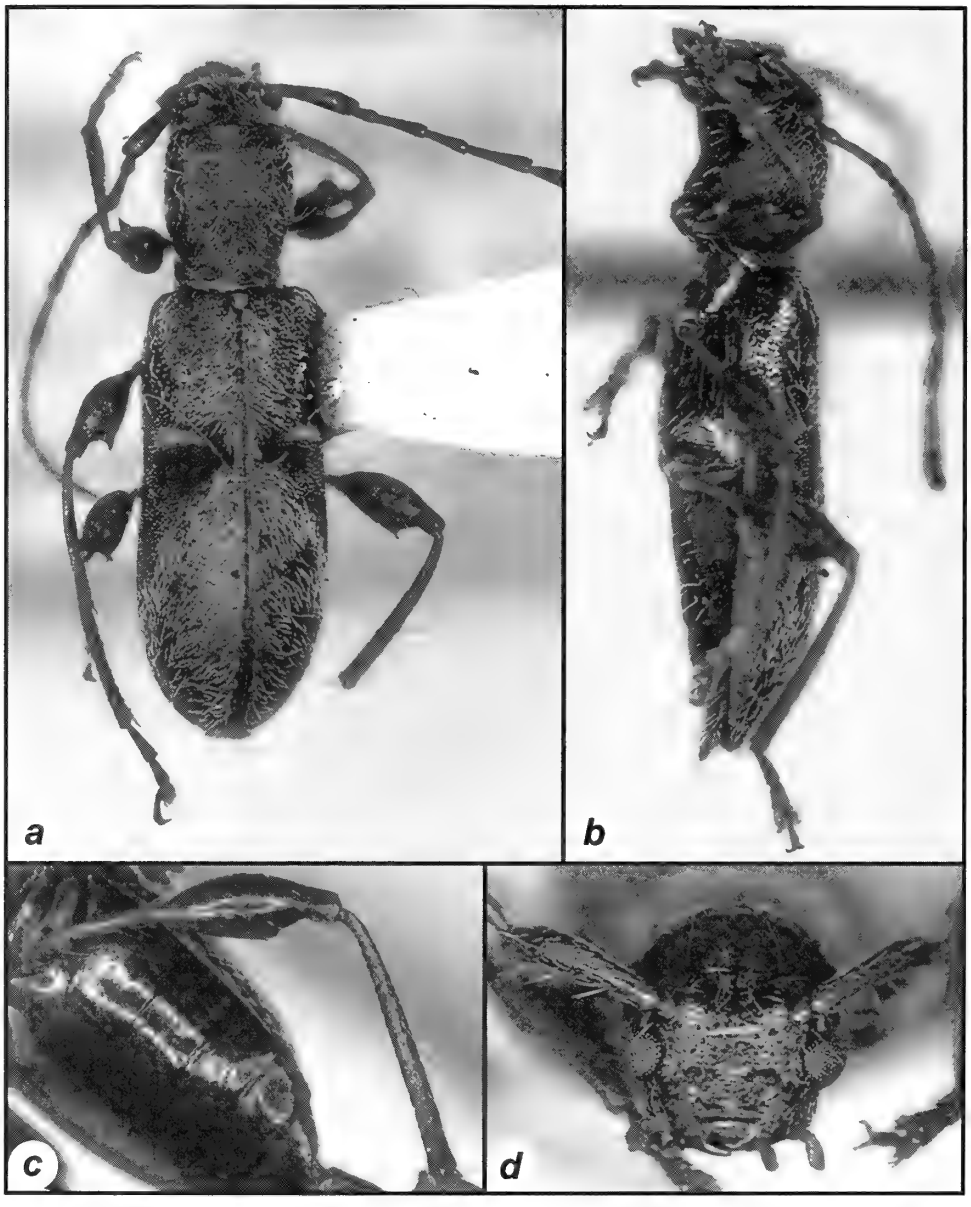

Fig. 13. *Plectromerus dominicanus* (Micheli). a, holotype female, dorsal habitus. b, holotype, female, lateral habitus. c, female, closeup of metafemur and metatibia, ventral view. d, holotype female, closeup of head.

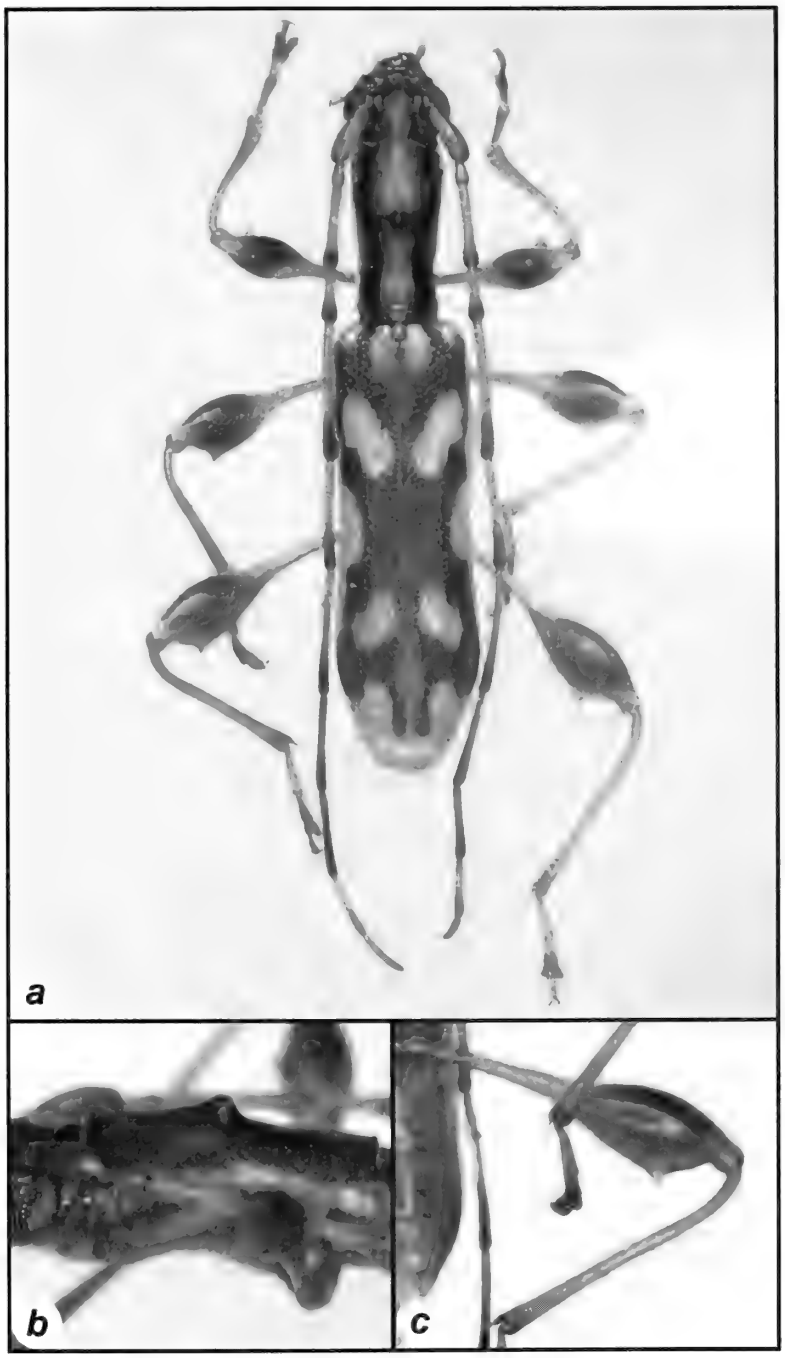

Fig. 14. *Plectromerus exis* Zayas, male. a, dorsal habitus. b, closeup of pronotum, lateral view. c, closeup of metafemur and metatibia, ventral view.

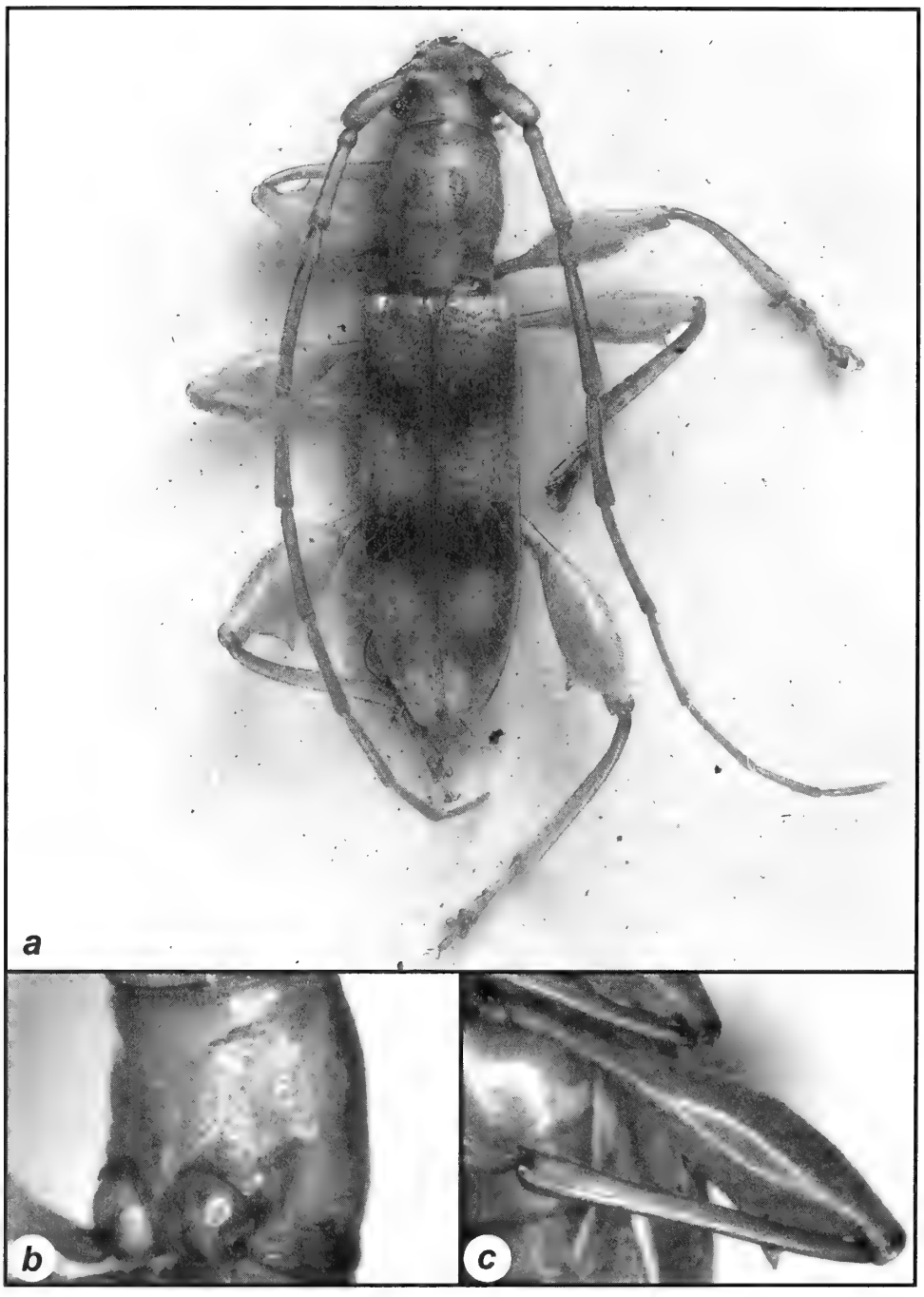

Fig. 15. *Plectromerus fasciatus* (Gahan). a, holotype male, dorsal habitus. b, male, closeup of pronotum, ventral view. c, male, closeup of metafemur and metatibia, ventral view.

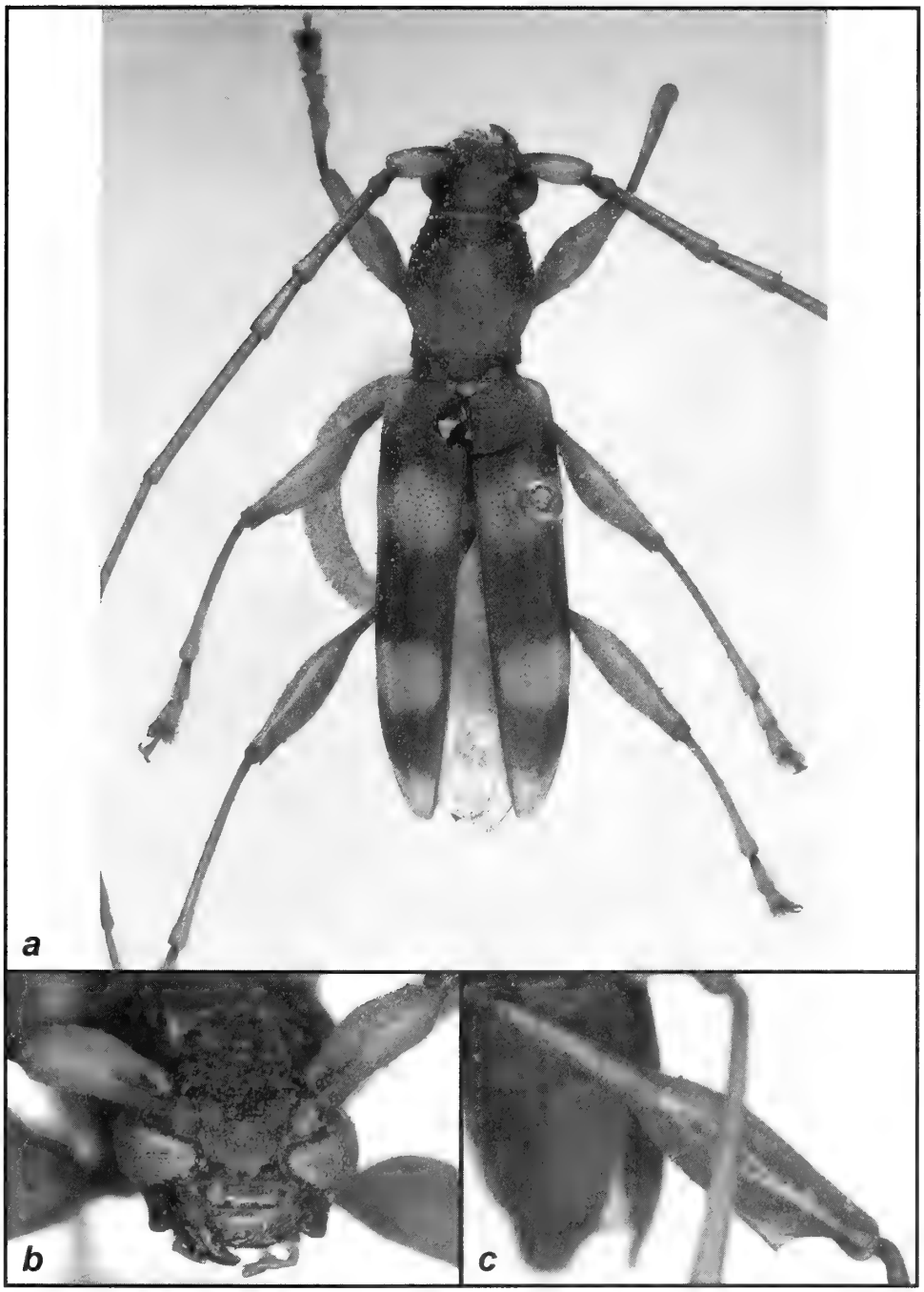

Fig. 16. *Plectromerus femoratus* (Fabricius), holotype male. a, dorsal habitus. b, closeup of scape with dorsal depression. c, closeup of metafemur and metatibia, ventral view.

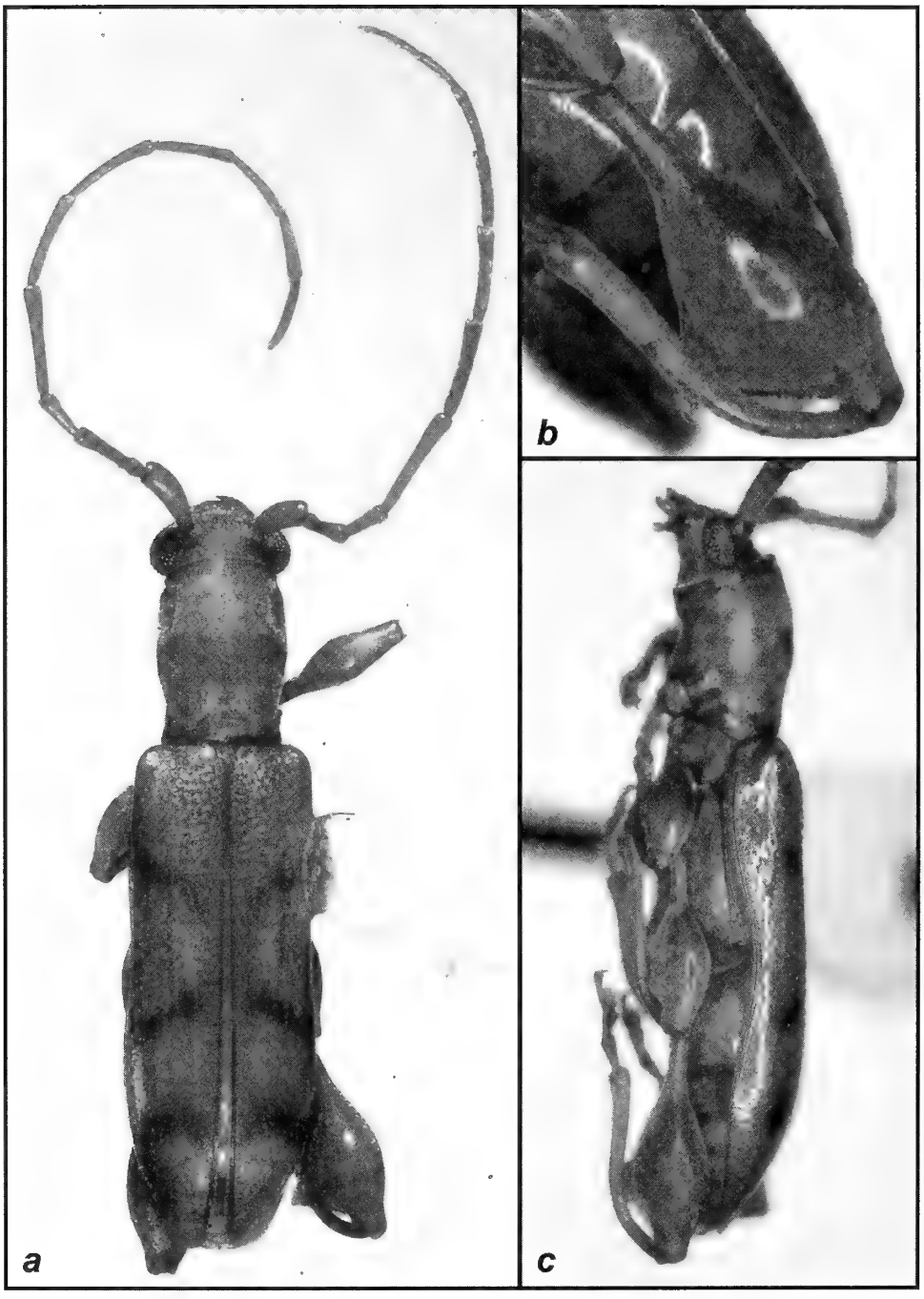

Fig. 17. *Plectromerus giesberti*, new species, holotype female. a, dorsal habitus. b, closeup of metafemur and metatibia, ventral view. c, lateral habitus.

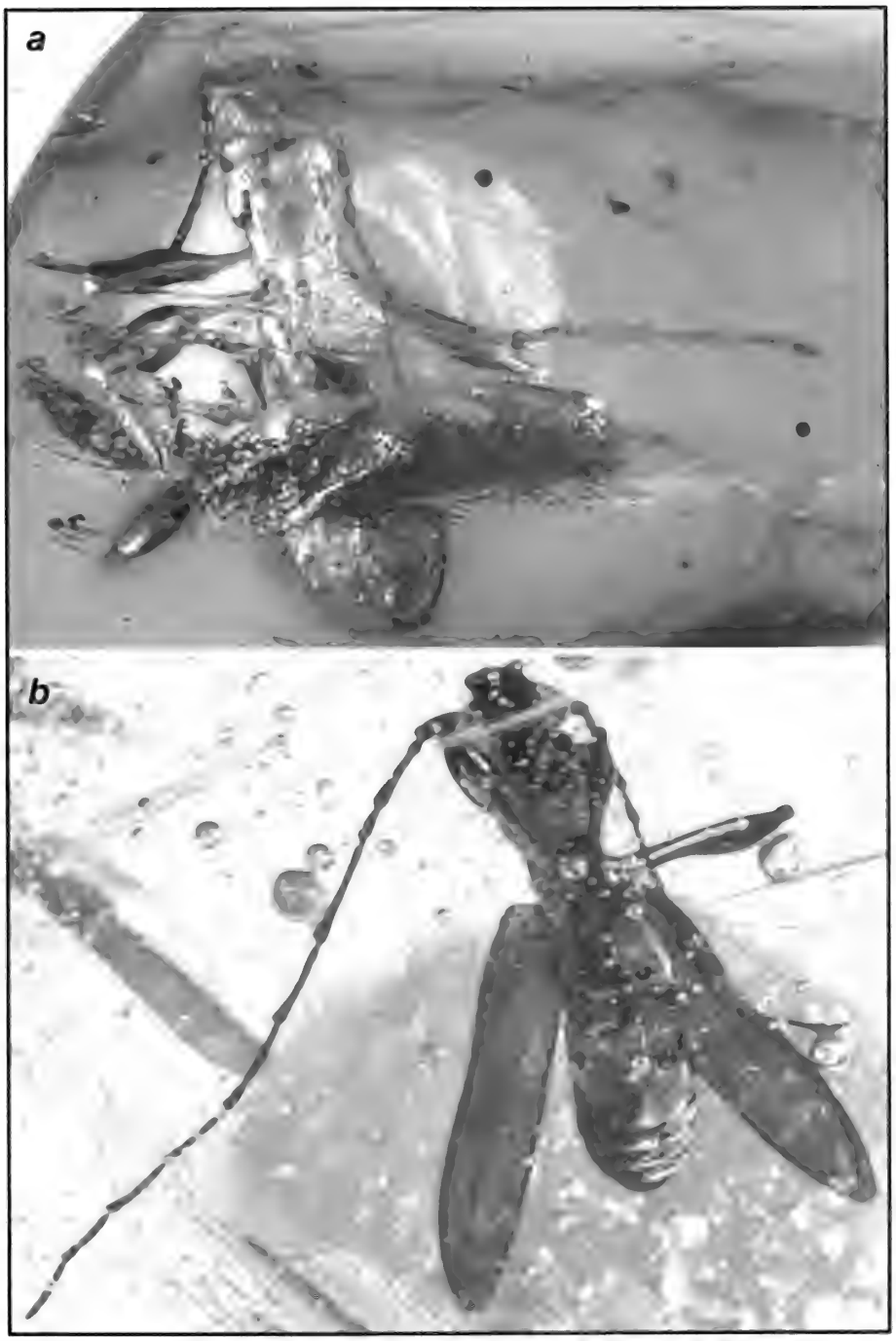

Fig. 18. Two *Plectromerus* species in Dominican amber. a, *Plectromerus grimaldii* Nearns & Branham †, holotype, dorsal habitus. b, *Plectromerus tertiarius* Vitali †, holotype, ventral habitus.

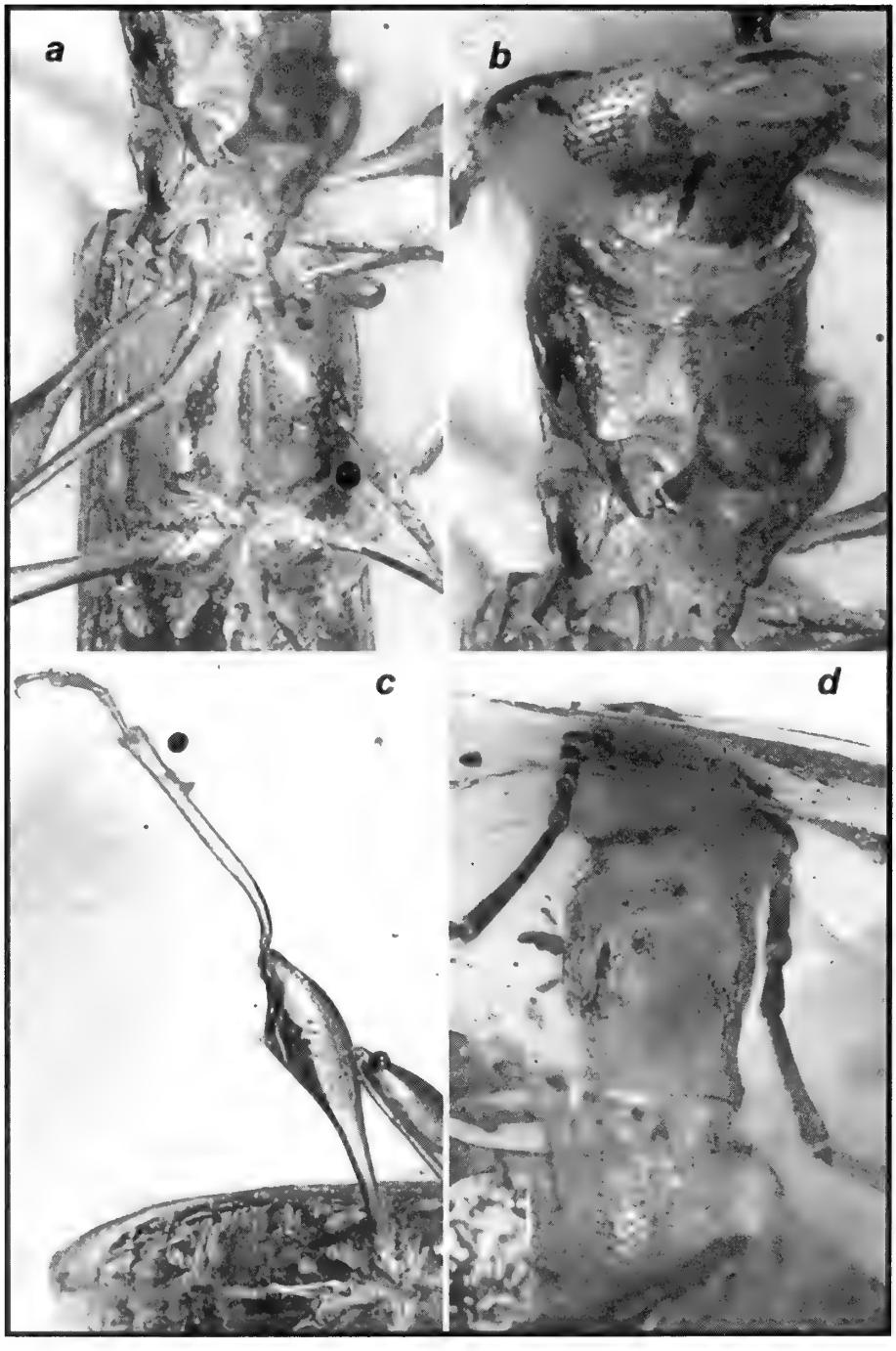

Fig. 19. *Plectromerus grimaldii* Nearns & Branham †, holotype. a, closeup of mesosternum, ventral view. b, closeup of prosternum, ventral view. c, closeup of right metafemur and metatibia, ventral view. d, closeup of pronotum and elytral punctation, dorsal view.

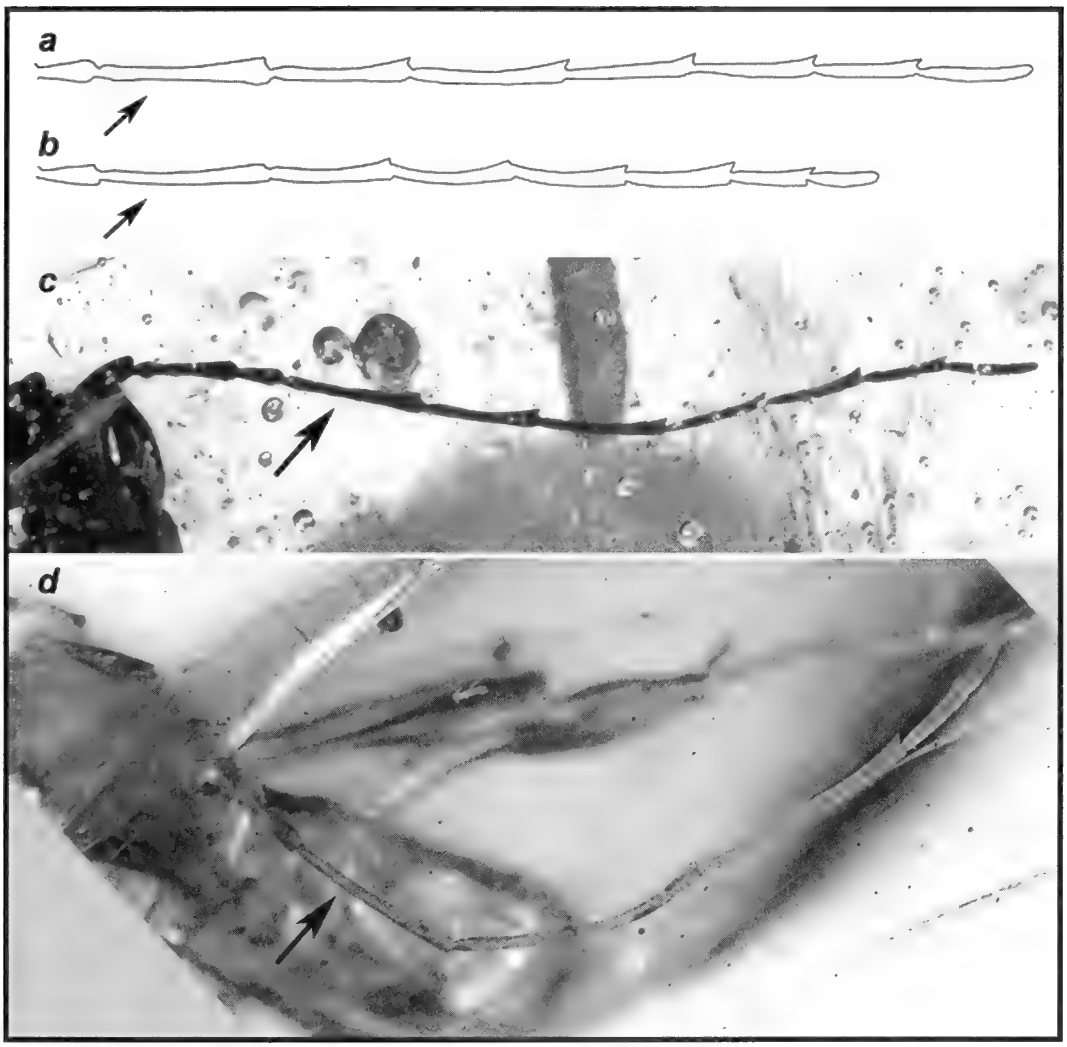

Fig. 20. Comparison of antennal morphology. a, *Plectromerus tertiarius* Vitali †, illustration of antennomeres 4-11, arrow points to fifth antennomere. b, *Plectromerus grimaldii* Nearns & Branham †, illustration of antennomeres 4-11, arrow points to fifth antennomere. c, *Plectromerus tertiarius* Vitali †, holotype, right antenna, ventral view, arrow points to fifth antennomere. d, *Plectromerus grimaldii* Nearns & Branham †, holotype, right antenna, dorsal view, arrow points to fifth antennomere.

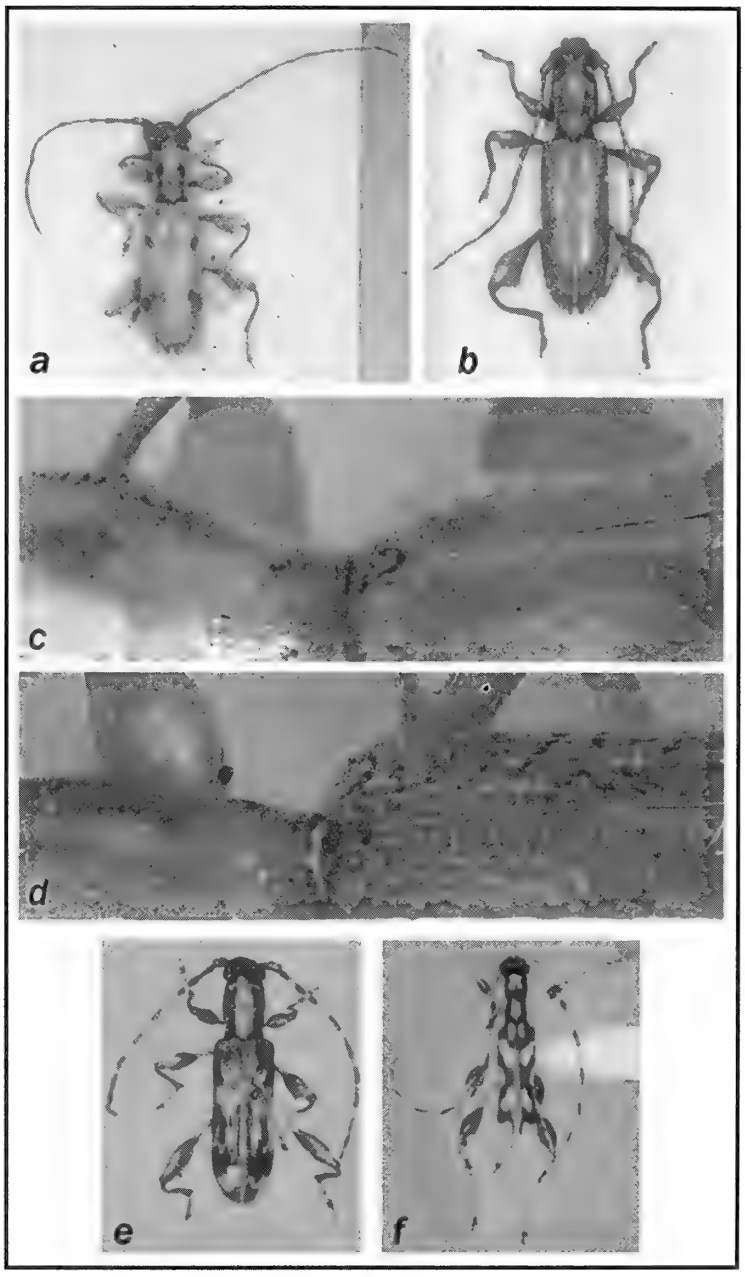

Fig. 21. Four species of *Plectromerus*. a, *Plectromerus distinctus* (Cameron), holotype. b, *Plectromerus serratus* (Cameron), holotype. c, *Plectromerus distinctus* (Cameron), view of pronotum and base of elytron. d, *Plectromerus serratus* (Cameron), view of pronotum and base of elytron. e, *Plectromerus dentipes* (Olivier). f, *Plectromerus exis* Zayas.

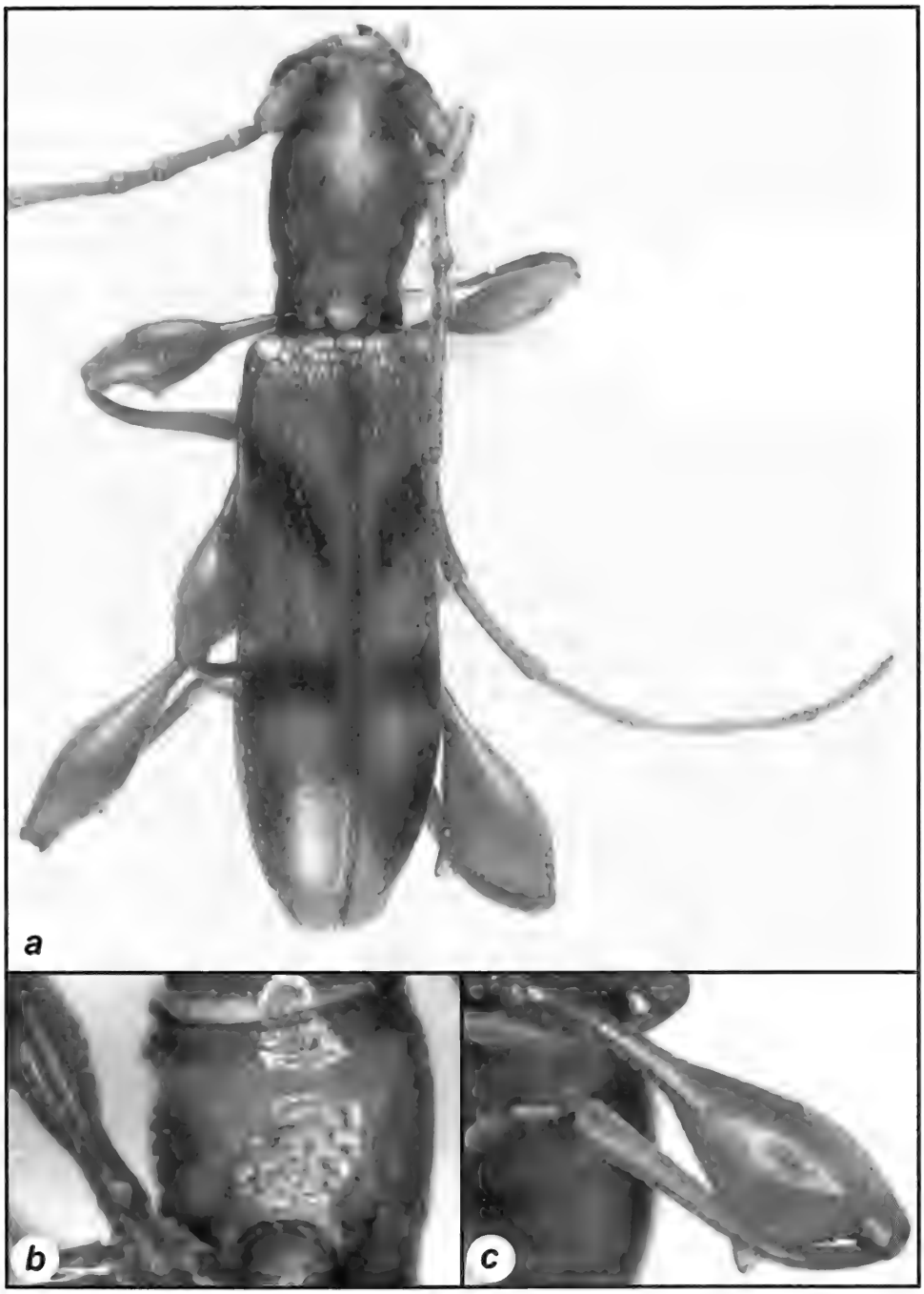

Fig. 22. *Plectromerus hovorei*, new species, holotype male. a, dorsal habitus. b, closeup of prosternum, ventral view. c, closeup of metafemur and metatibia, ventral view.

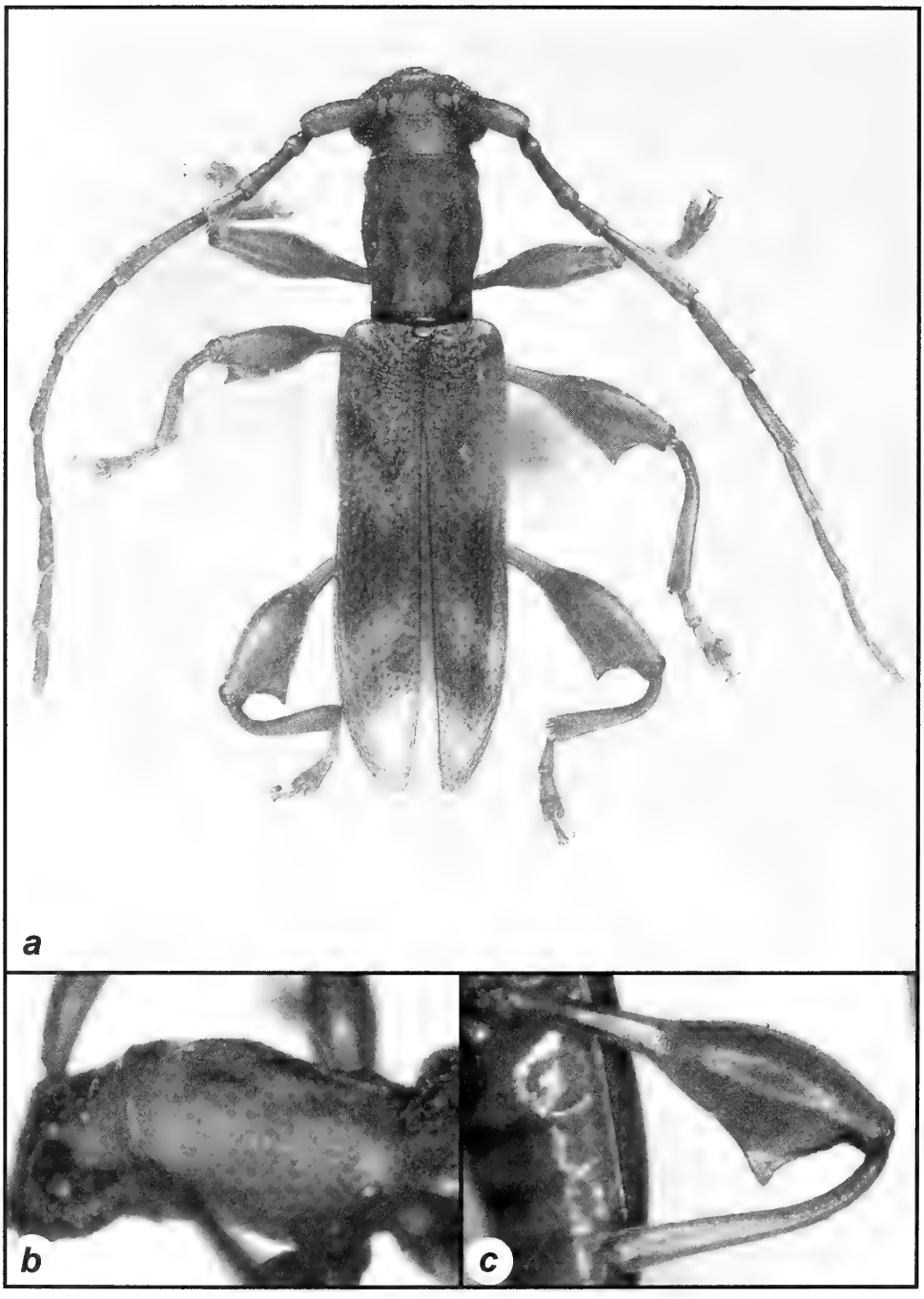

Fig. 23. *Plectromerus josephi*, new species, holotype male. a, dorsal habitus. b, closeup of pronotum, lateral view. c, closeup of metafemur and metatibia, ventral view.

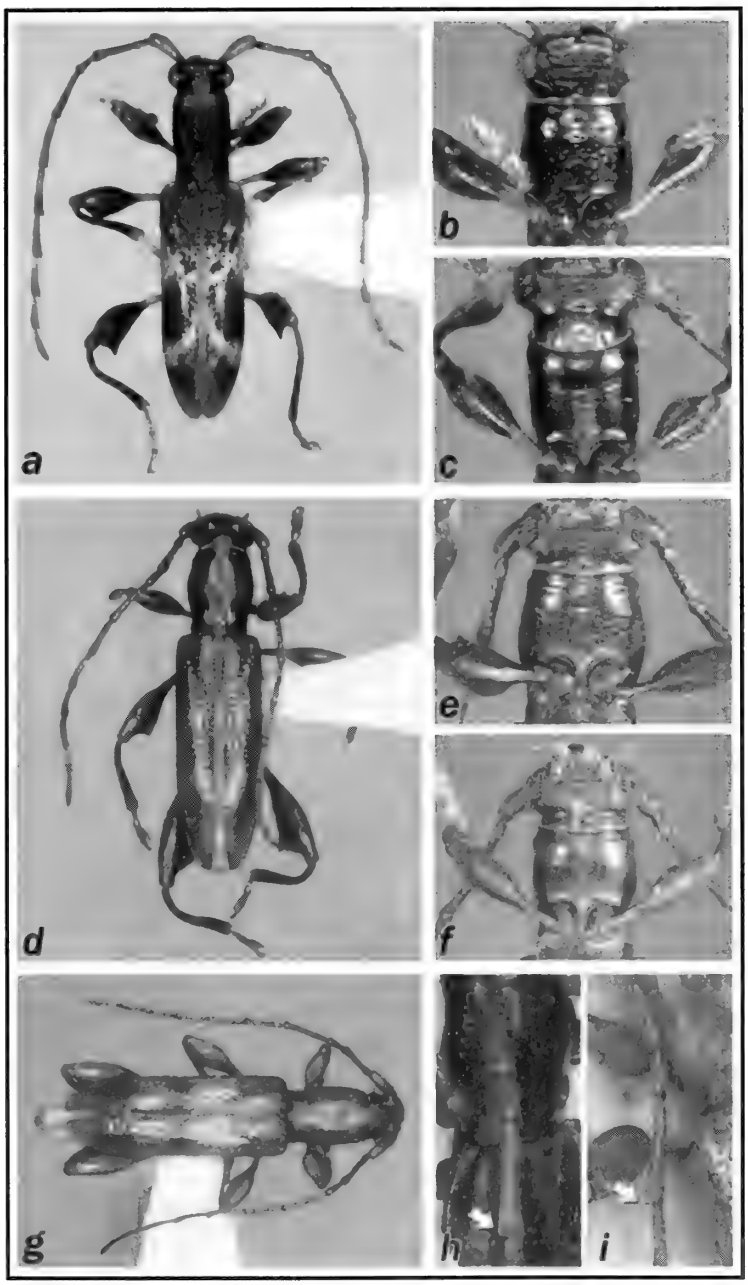

Fig. 24. Two species of *Plectromerus*. a–c, *Plectromerus lingafelteri* Micheli & Nearns. a, holotype. b, closeup of prosternum, male. c, closeup of prosternum, female. d–h, *Plectromerus ramosi* Micheli & Nearns. d, holotype. e, closeup of prosternum, male. f, closeup of prosternum, female. g, lighter phenotype. h, closeup of fifth antennomere. i, *Plectromerus serratus* (Cameron), closeup of fifth antennomere of holotype.

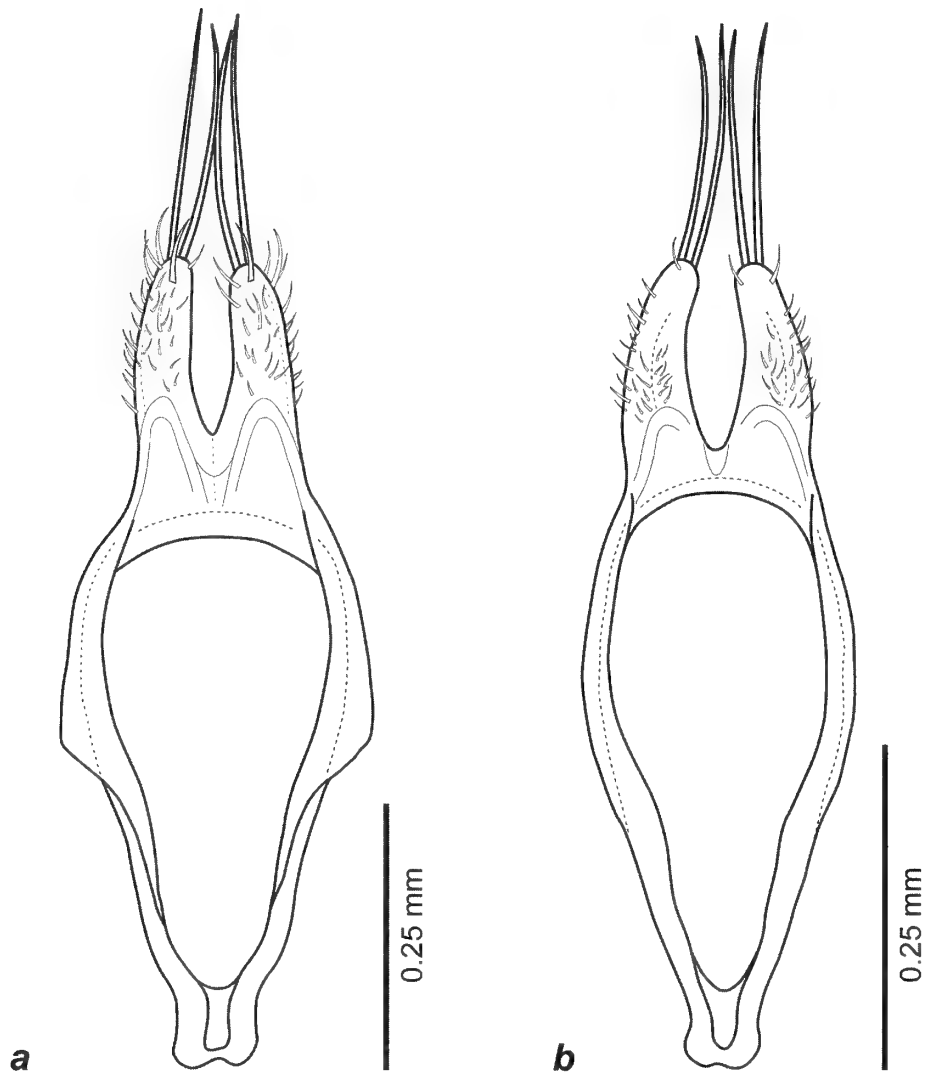

Fig. 25. Tegmen and parameres, ventral view. a, *Plectromerus lingafelteri* Micheli & Nearns. b, *Plectromerus ramosi* Micheli & Nearns.

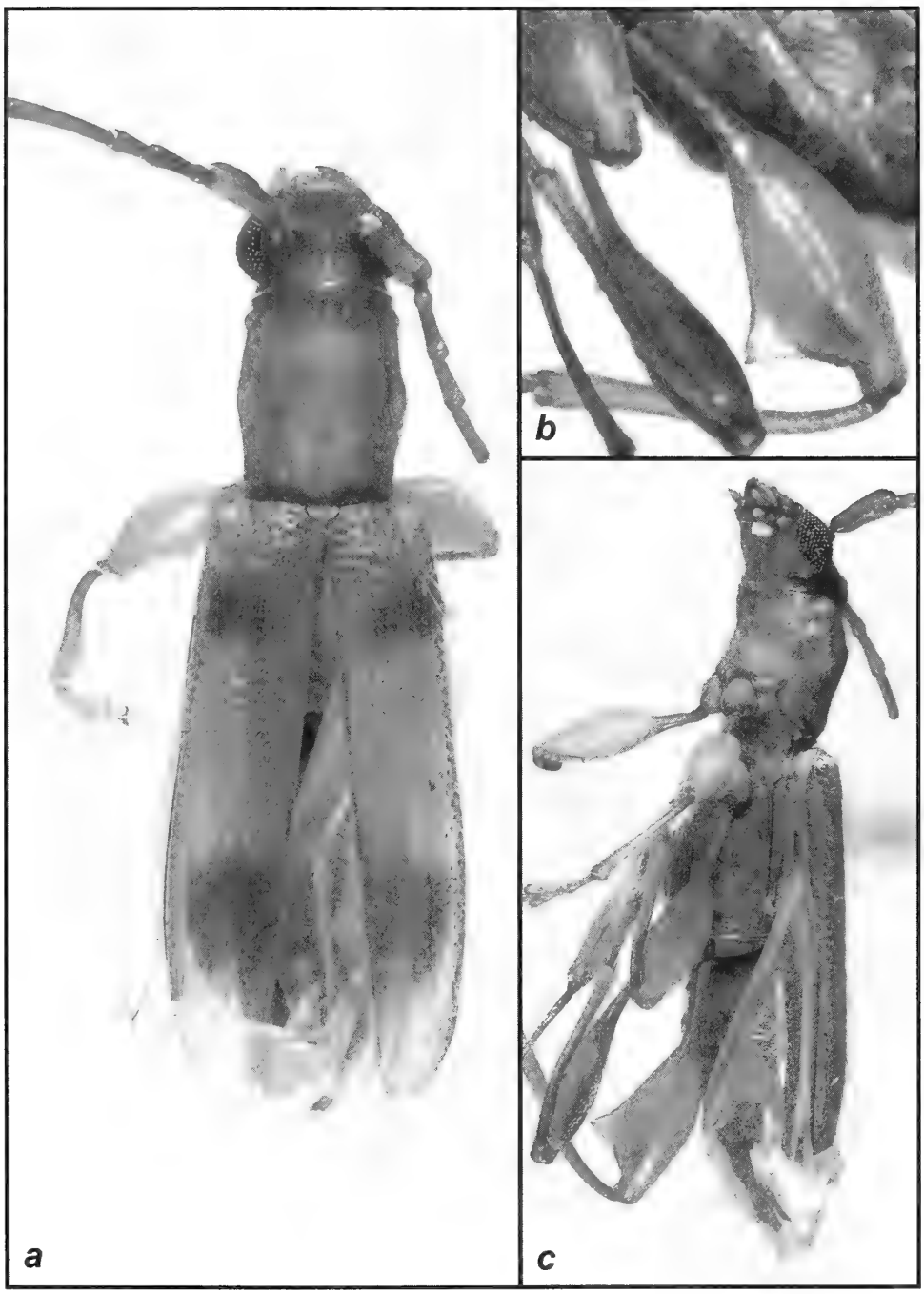

Fig. 26. *Plectromerus michelii*, new species, holotype female. a, dorsal habitus. b, closeup of metafemur and metatibia, ventral view. c, lateral habitus.

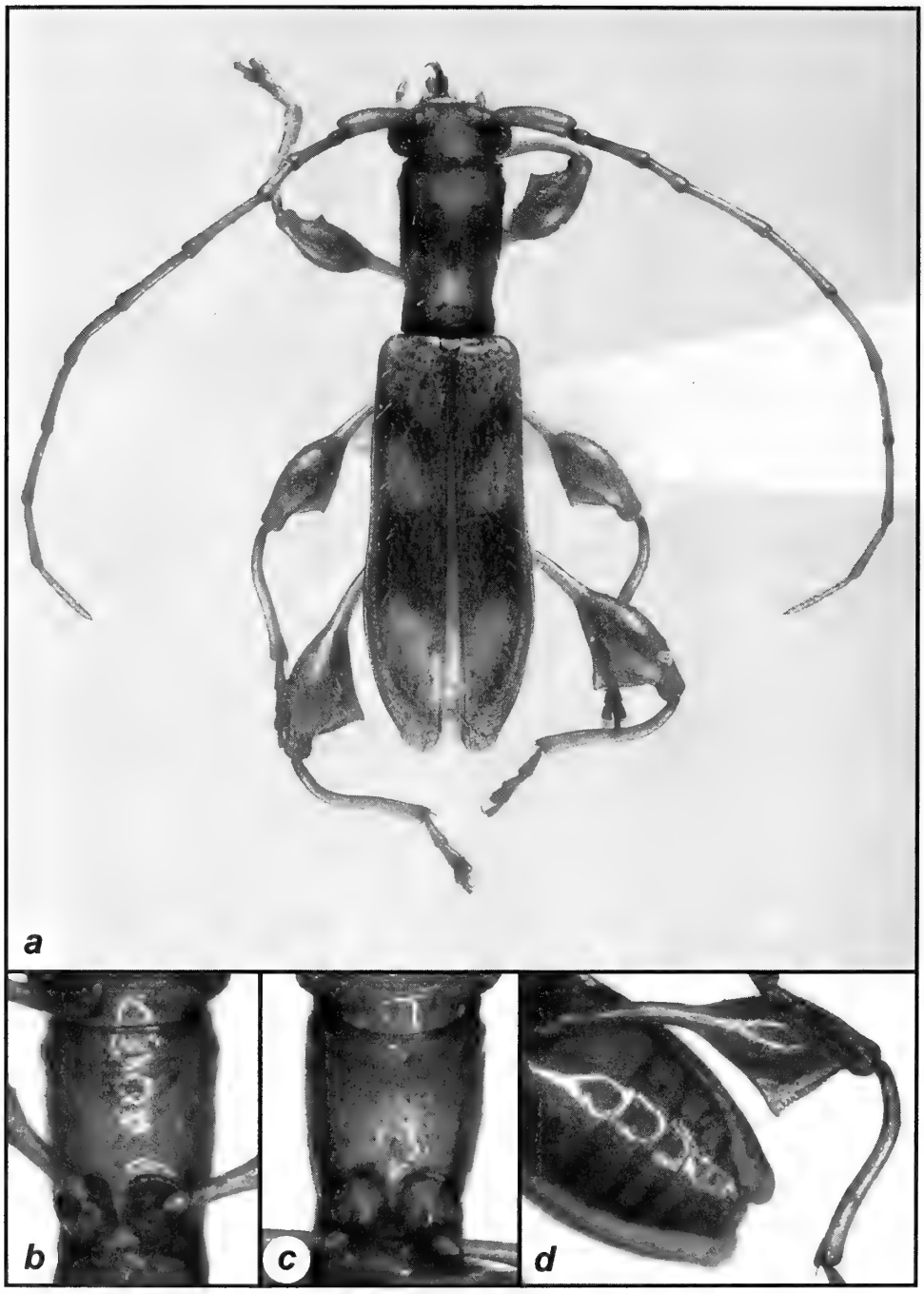

Fig. 27. *Plectromerus morrisi*, new species. a, holotype female, dorsal habitus. b, holotype female, closeup of prosternum. c, allotype male, closeup of prosternum. d, holotype female, closeup of metafemur and metatibia, ventral view.

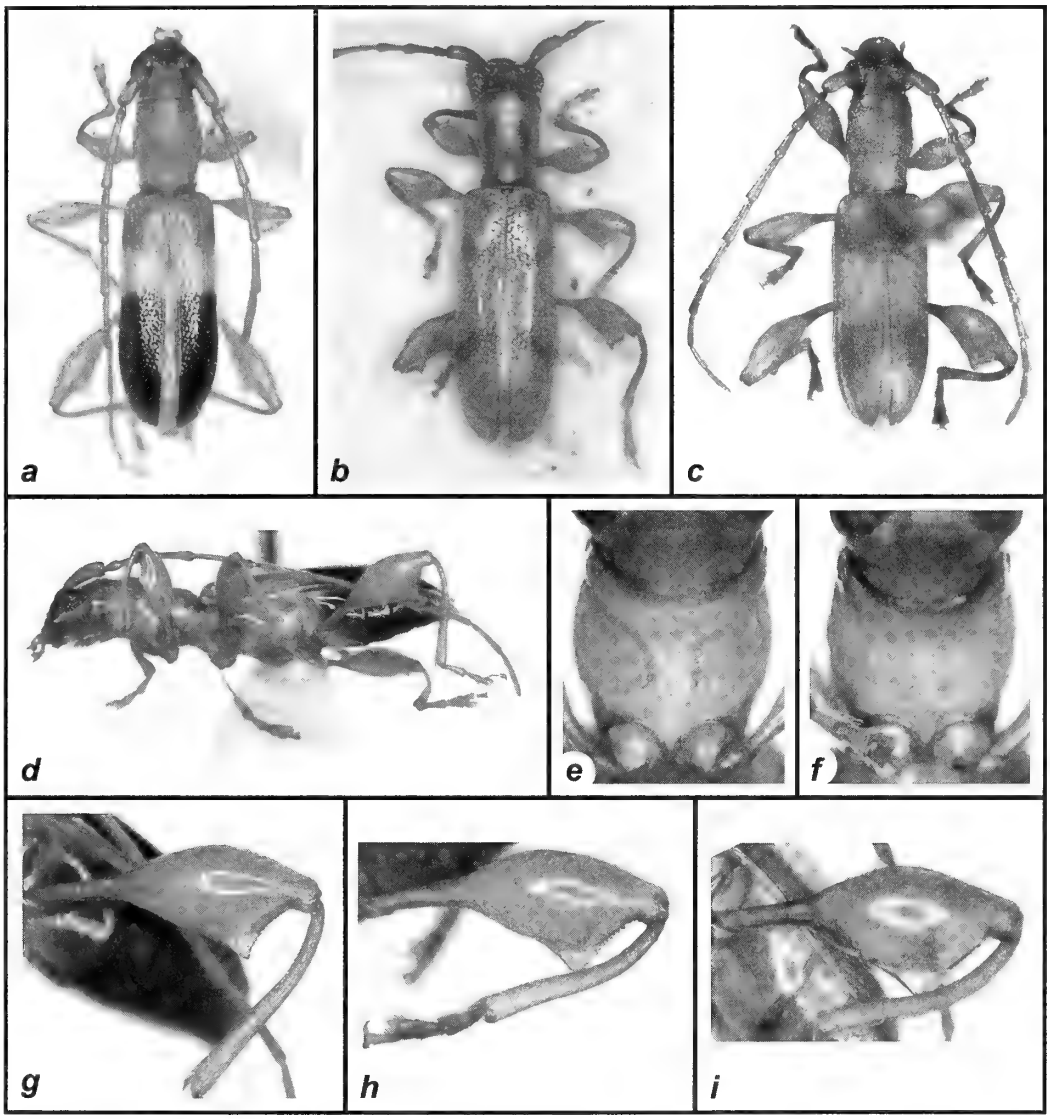

Fig. 28. Three species of *Plectromerus*. a, *Plectromerus navassae* Nearns & Steiner, holotype male, dorsal habitus. b, *Plectromerus distinctus* (Cameron), holotype female, dorsal habitus. c, *Plectromerus wappesi* Giesbert, paratype male, dorsal habitus. d–g, *Plectromerus navassae* Nearns & Steiner. d, holotype male, lateral view. e, holotype male, closeup of prosternum. f, allotype female, closeup of prosternum. g, holotype male, metafemur and metatibia, ventral view. h, *Plectromerus distinctus* (Cameron), holotype female, metafemur and metatibia, ventral view. i, *Plectromerus wappesi* Giesbert, paratype male, metafemur and metatibia, ventral view.

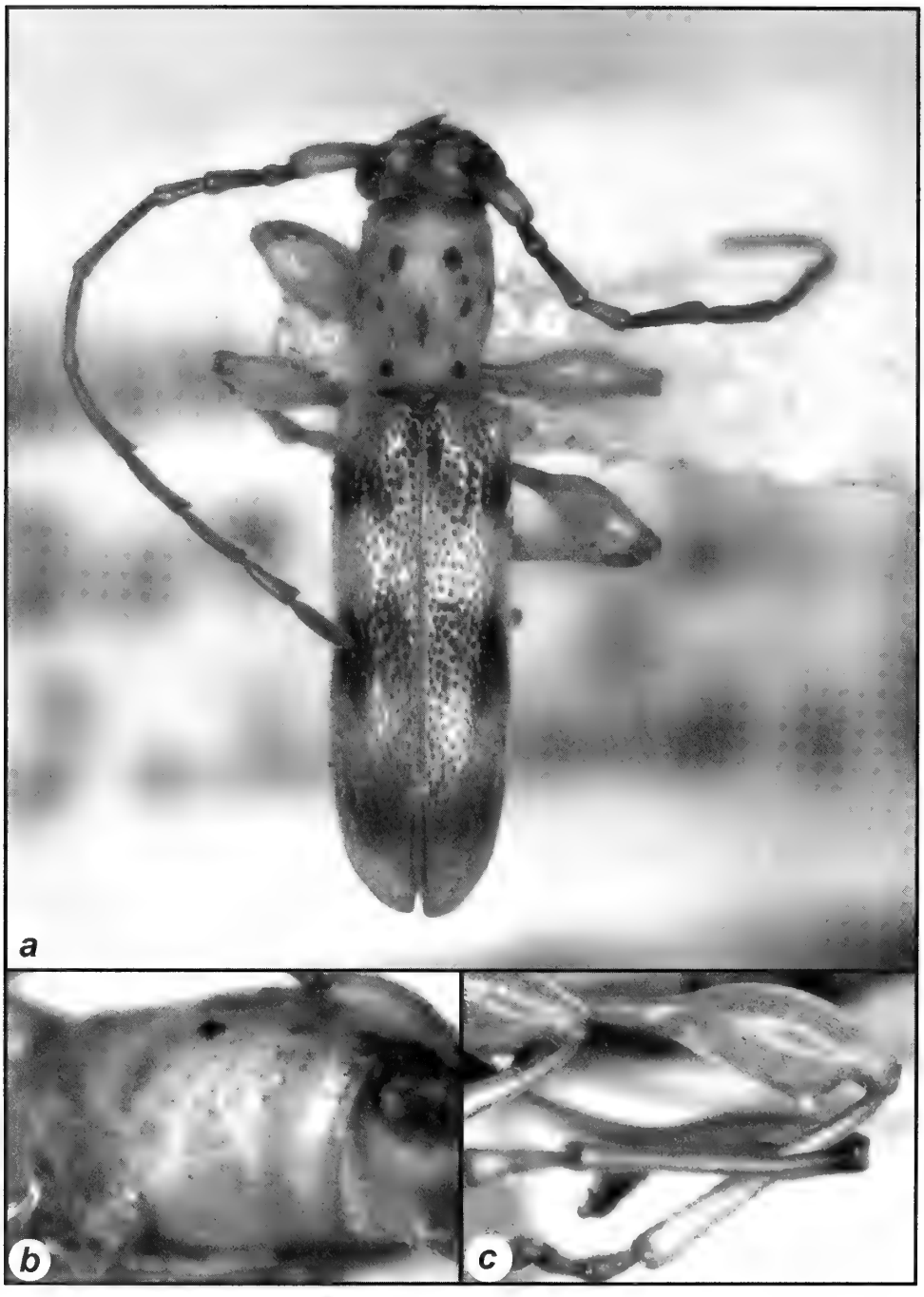

Fig. 29. *Plectromerus ornatus* Fisher. a, holotype male, dorsal habitus. b, holotype male, closeup of pronotum, lateral view. c, female, closeup of metafemur and metatibia, dorsal view.

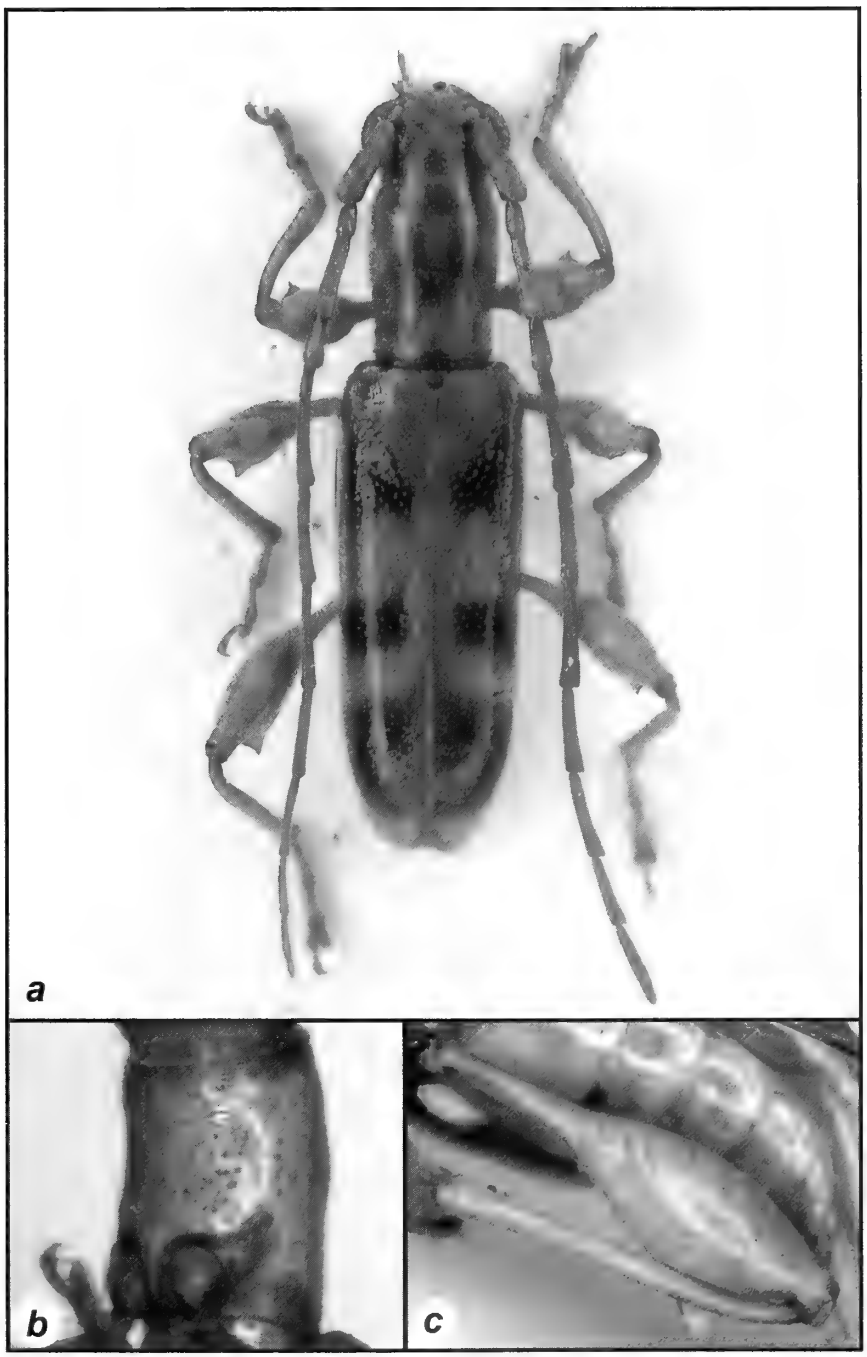

Fig. 30. *Plectromerus pinicola* Zayas, male. a, dorsal habitus. b, closeup of prosternum. c, closeup of metafemur and metatibia, ventral view.

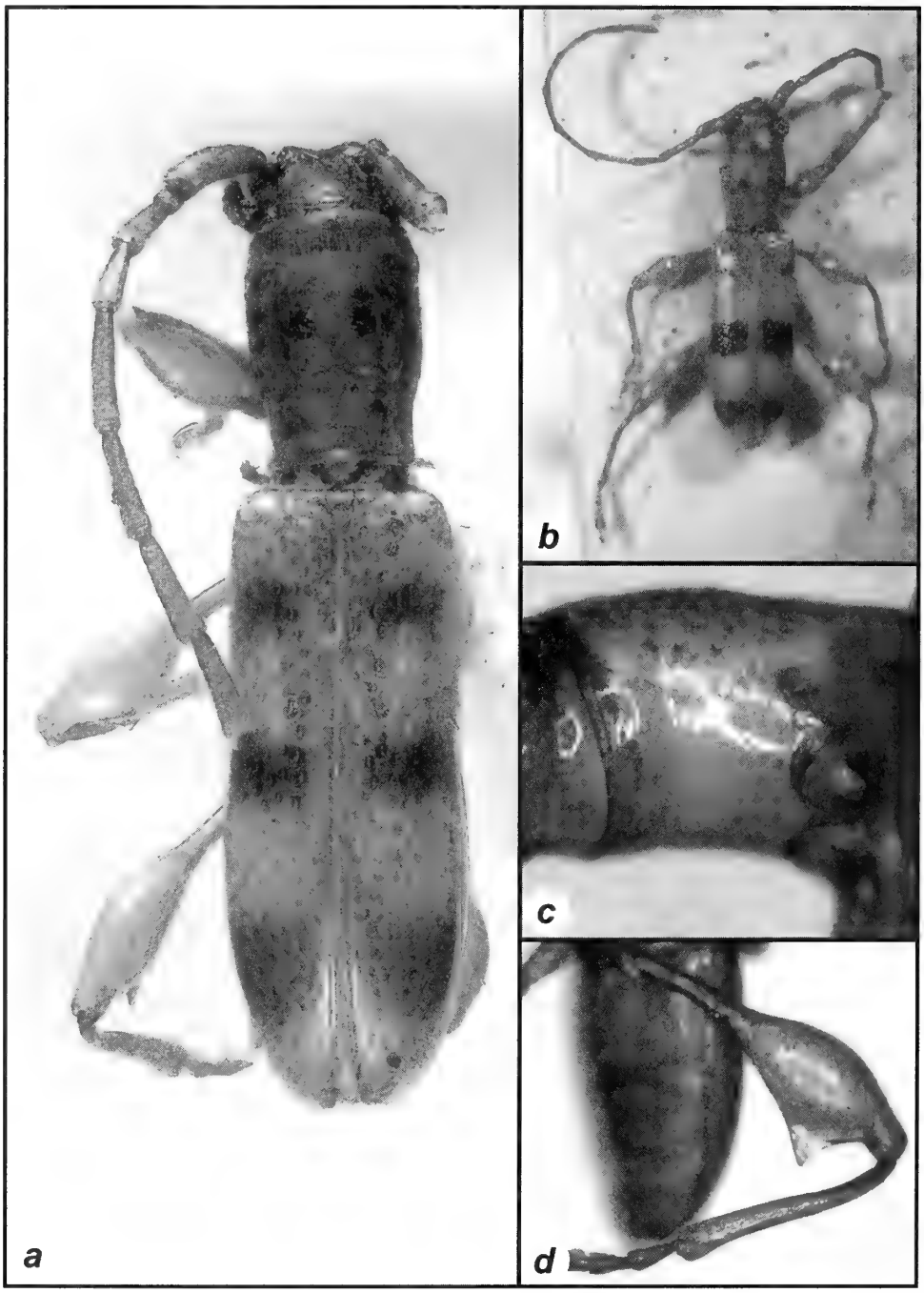

Fig. 31. *Plectromerus pumilus* Cazier & Lacey. a, holotype male, dorsal habitus. b, specimen from FDZC, dorsal habitus. c, male, closeup of prosternum. d, male, closeup of metafemur and metatibia, ventral view.

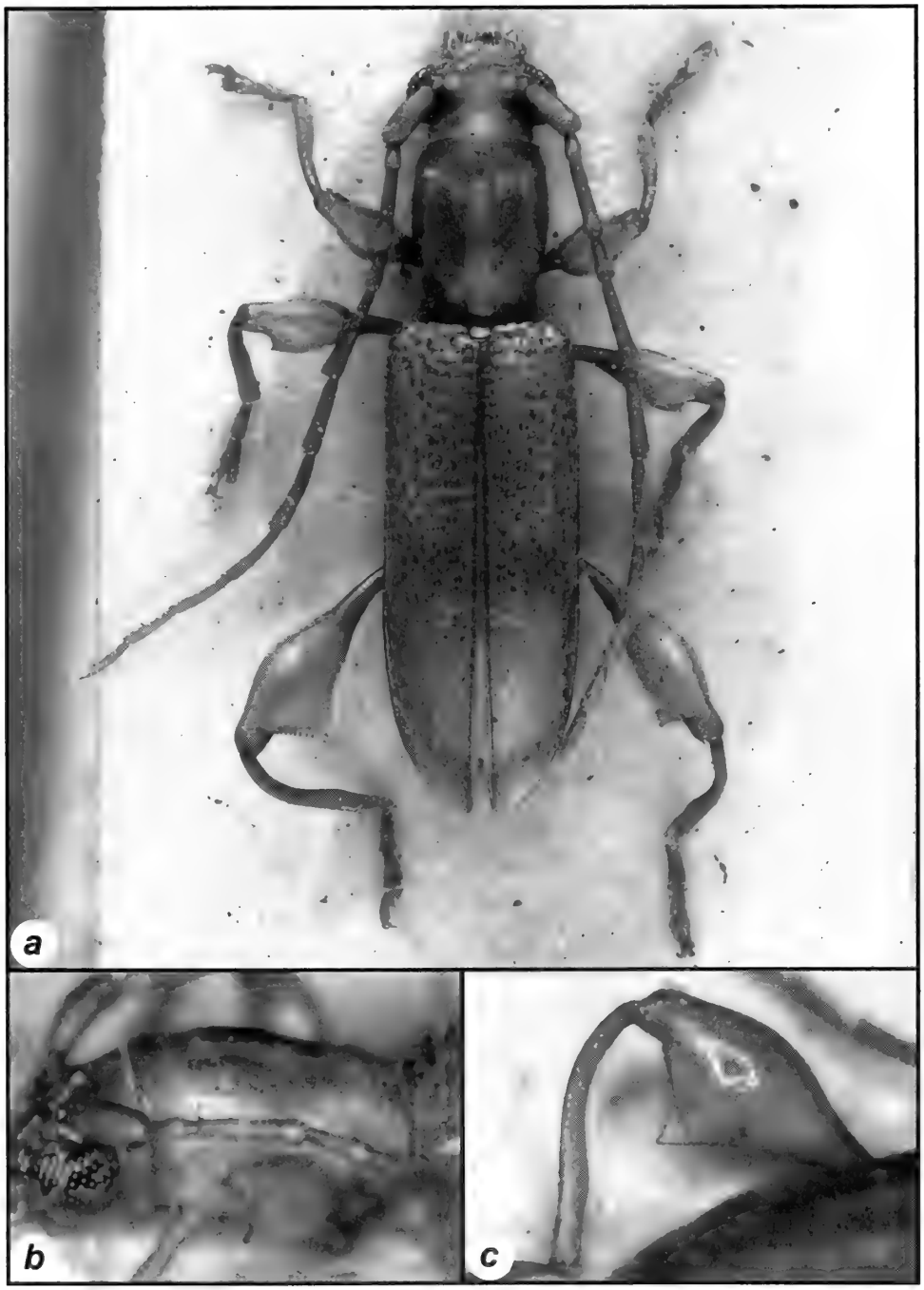

Fig. 32. *Plectromerus serratus* (Cameron), holotype male. a, dorsal habitus. b, closeup of pronotum, lateral view. c, closeup of metafemur and metatibia, dorsal view.

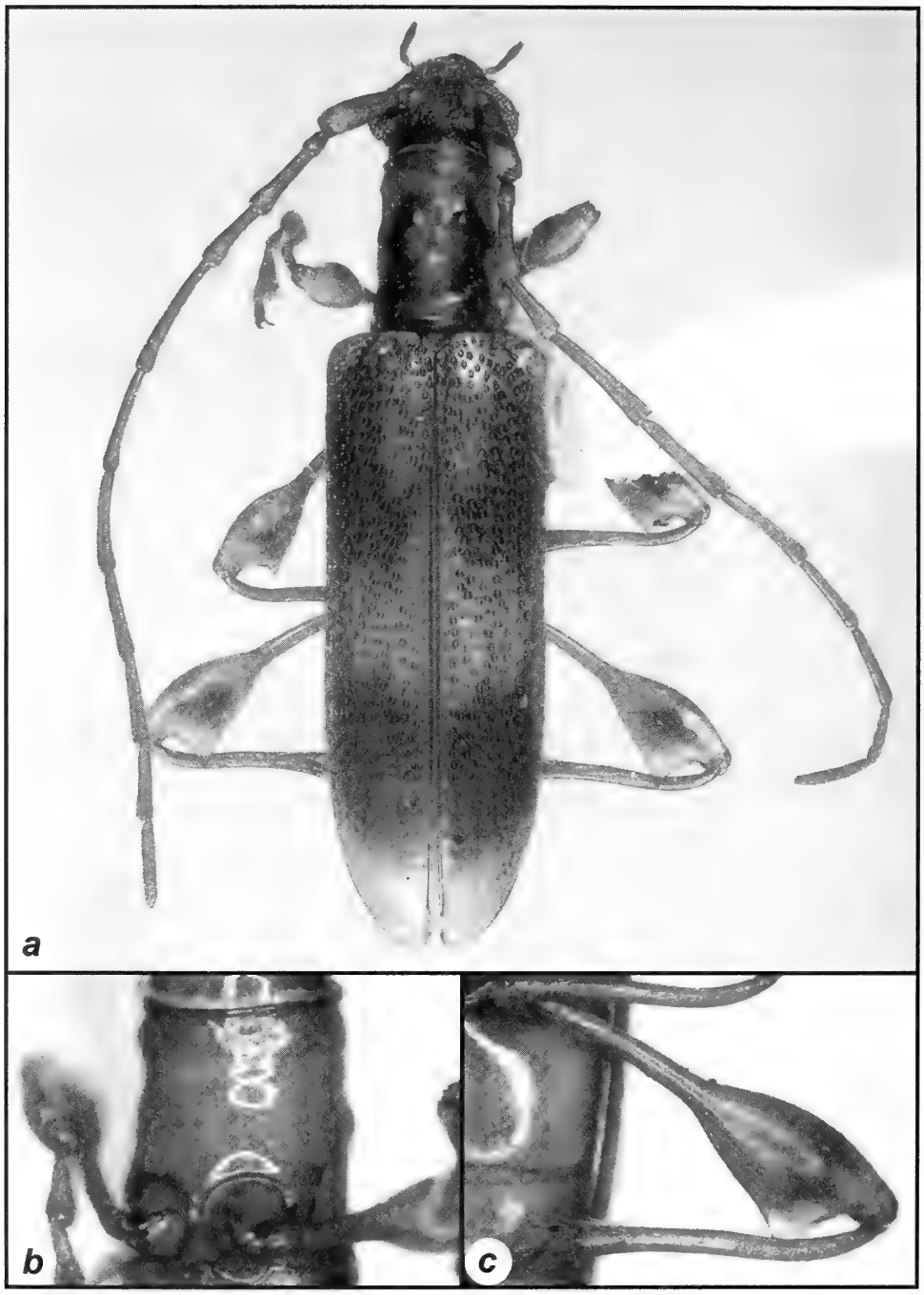

Fig. 33. *Plectromerus thomasi*, new species, holotype female. a, dorsal habitus. b, closeup of prosternum. c, closeup of metafemur and metatibia, ventral view.

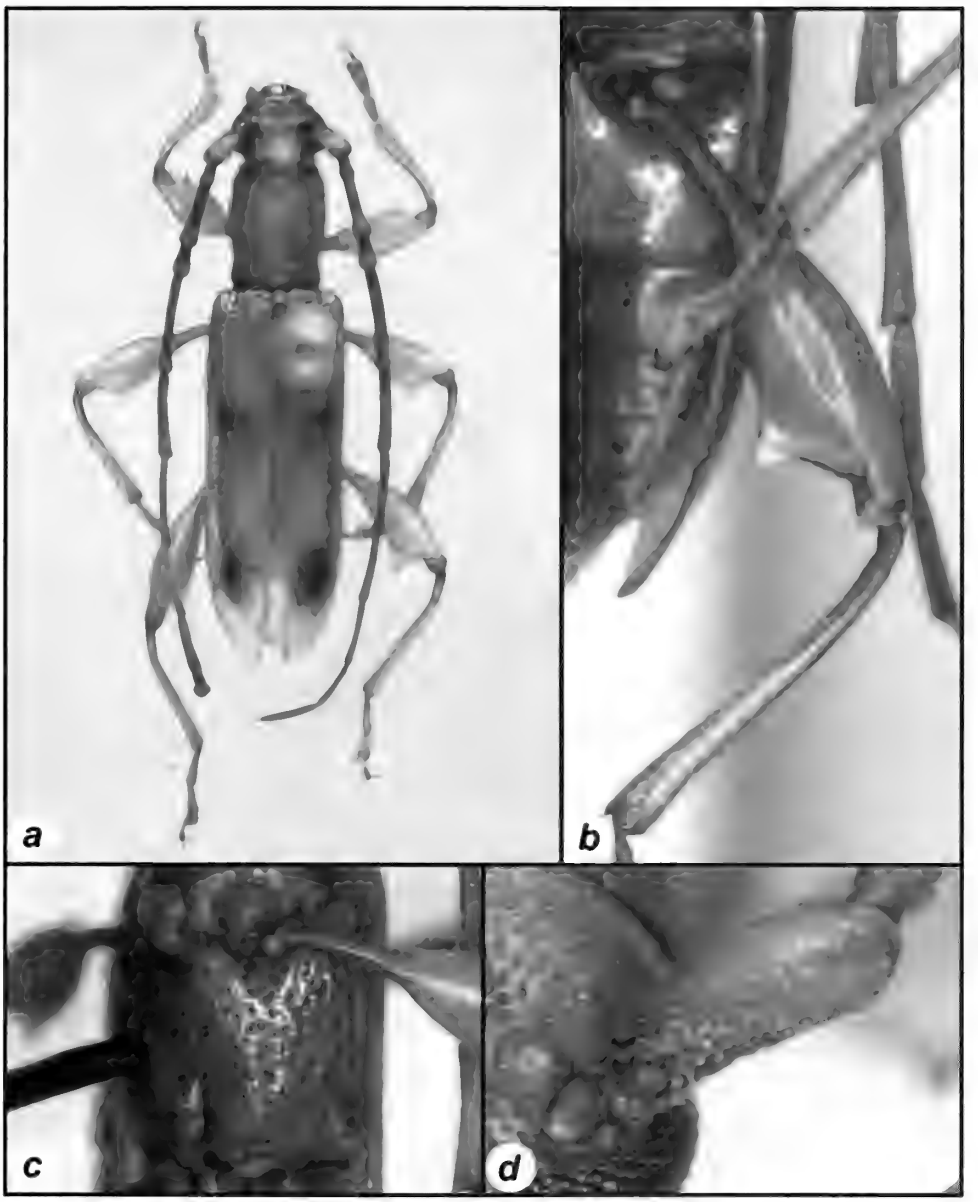

Fig. 34. *Plectromerus turnbowi*, new species, holotype male. a, dorsal habitus. b, closeup of metafemur and metatibia, ventral view. c, closeup of metasternum. d, closeup of scape depression, dorsal view.

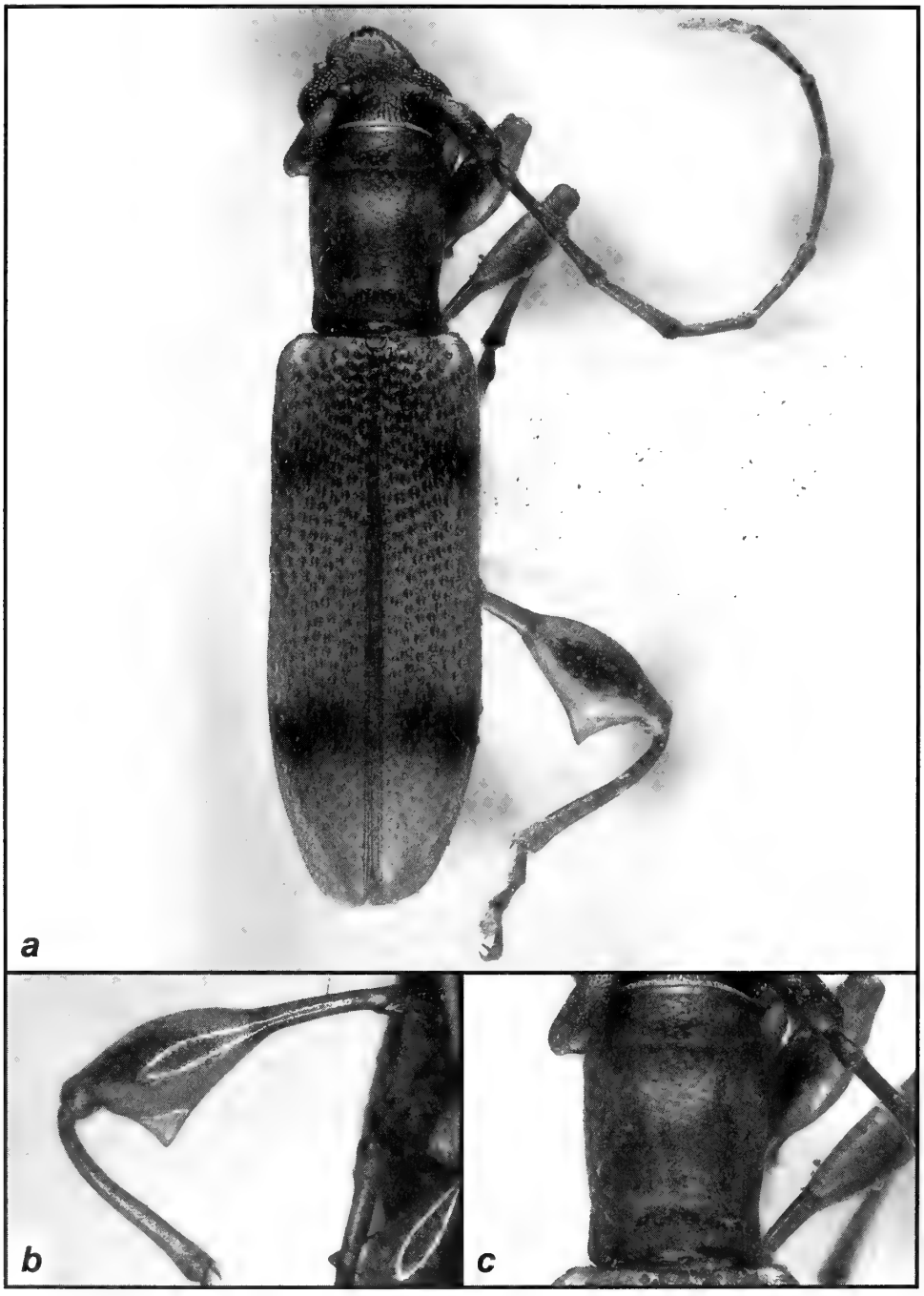

Fig. 35. *Plectromerus unidentatus* Fisher, paratype female. a, dorsal habitus. b, closeup of metafemur and metatibia, ventral view. c, closeup of pronotum.

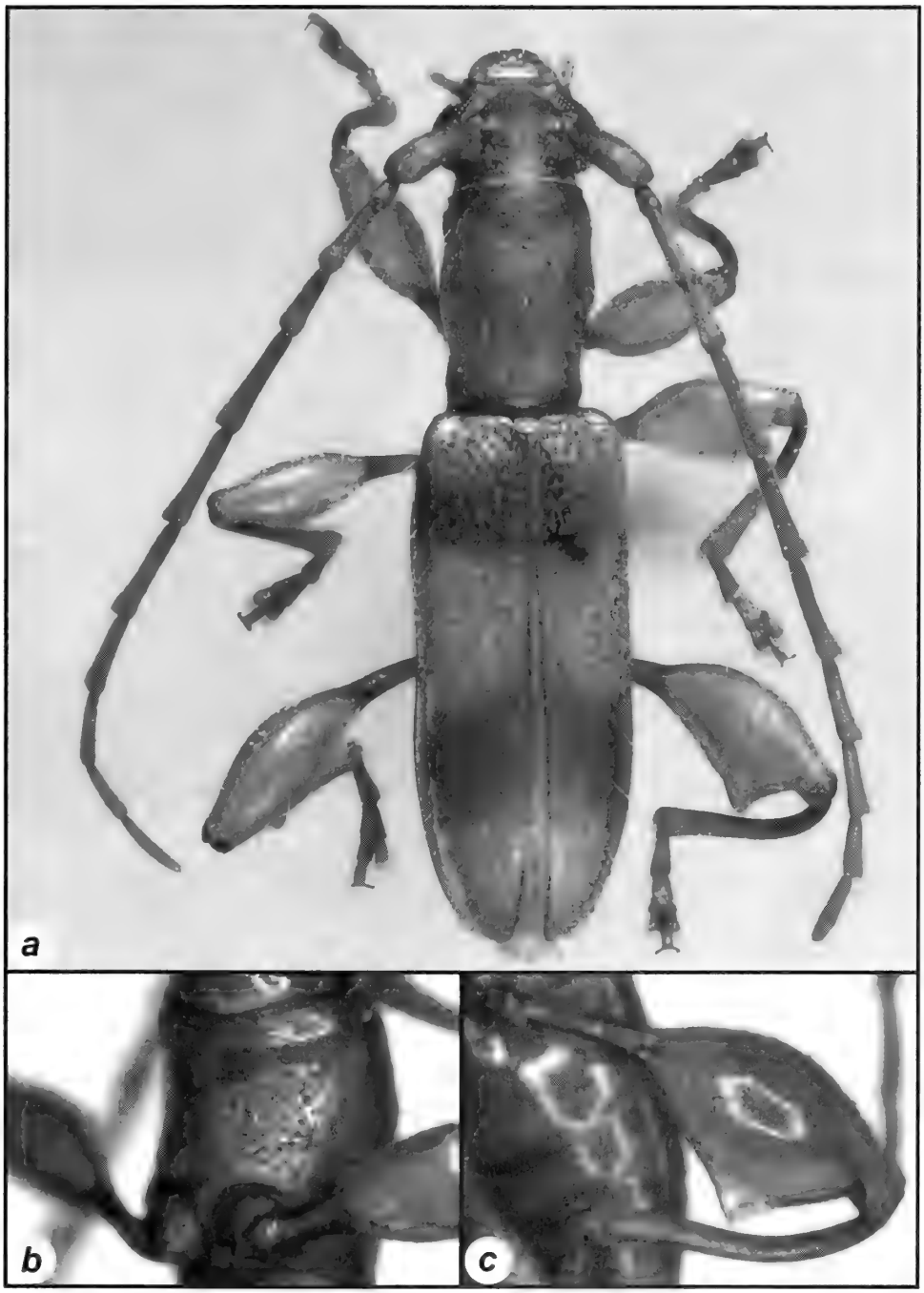

Fig. 36. *Plectromerus wappesi* Giesbert, paratype male. a, dorsal habitus. b, closeup of prosternum. c, closeup of metafemur and metatibia, ventral view.

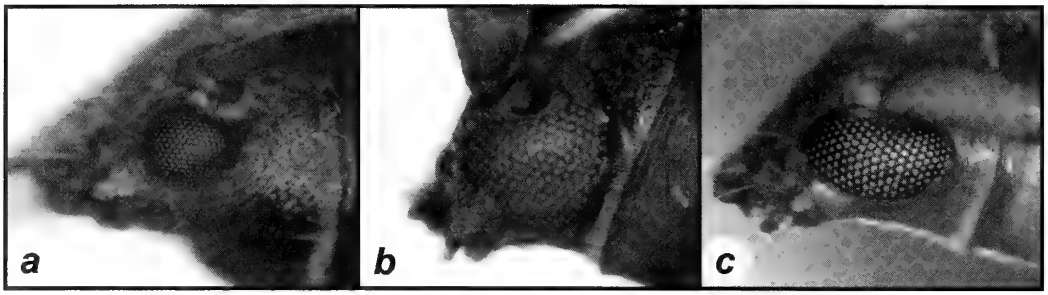

Fig. 37. Character 1: eye shape. a, ovate (*Plectromerus dominicanus*). b, ovate-emarginate (*Coscinedes gracilis*). c, subreniform (*Plectromerus fasciatus*).

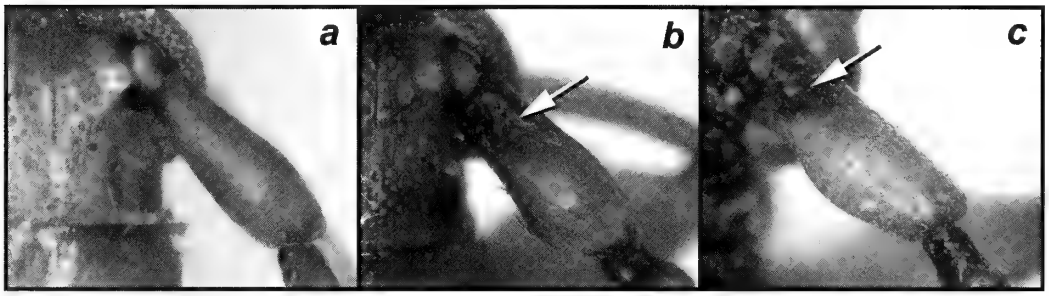

Fig. 38. Character 4: scape with depression on dorsal surface (arrow points to depression). a, absent (*Plectromerus acunai*). b, shallow (*Plectromerus turnbowi*, new species). c, deep (*Plectromerus femoratus*).

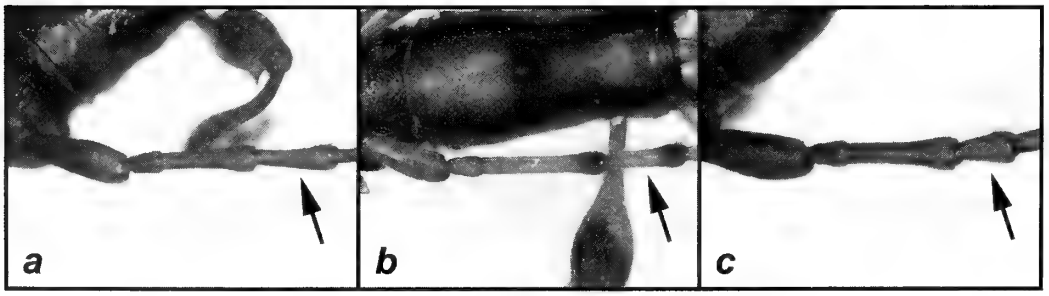

Fig. 39. Character 5: length of third antennomere compared to fourth (arrow points to fourth antennomere). a, about 1.3 times longer or less (*Plectromerus thomasi*, new species). b, about 1.5 times longer (*Plectromerus exis*). c, about 1.7 times longer or more (*Plectromerus dezayasi*, new species).

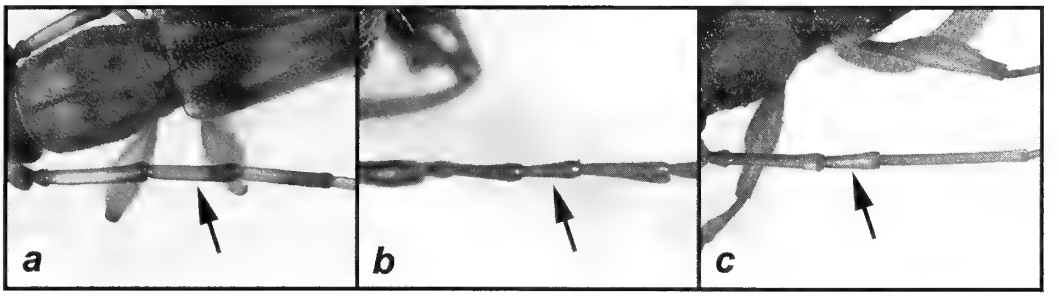

Fig. 40. Character 6: length of fifth antennomere compared to fourth (arrow points to fourth antennomere). a, about 1.3 times longer or less (*Curius punctatus*). b, about 1.5 times longer (*Plectromerus dominicanus*). c, about 1.7 times longer or more (*Plectromerus femoratus*).

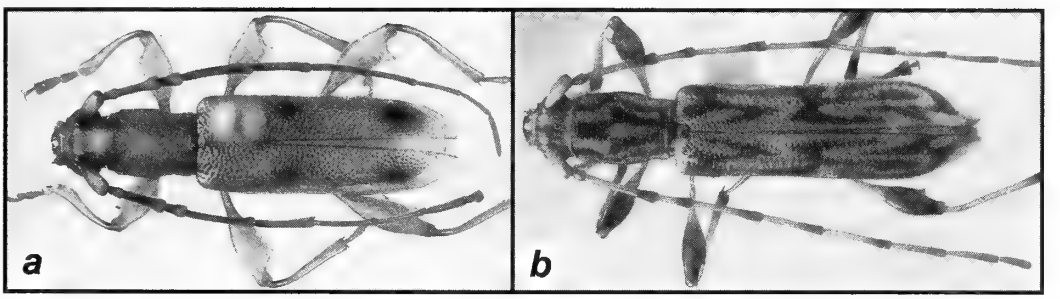

Fig. 41. Character 7: antennae annulate. a, absent (*Plectromerus turnbowi*, new species). b, present (*Curius chemsaki*).

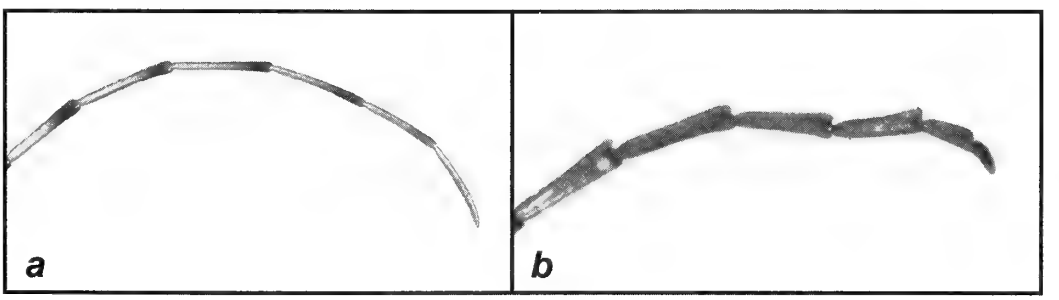

Fig. 42. Character 9: antennomeres 6-10 produced externally at apices on outer margins. a, absent (*Curius dentatus*). b, present (*Plectromerus dezayasi*, new species).

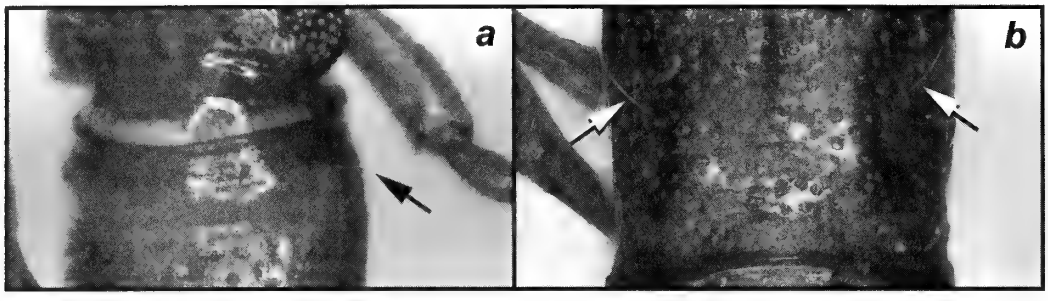

Fig. 43. Characters 11 and 12 (arrows point to setae). a, pronotum with long, suberect setae anterolaterally (*Plectromerus hovorei*, new species). b, pronotum, sub-medial, basal third of disk with 1-4 long, suberect setae arising from deep puncture (*Plectromerus acunai*).

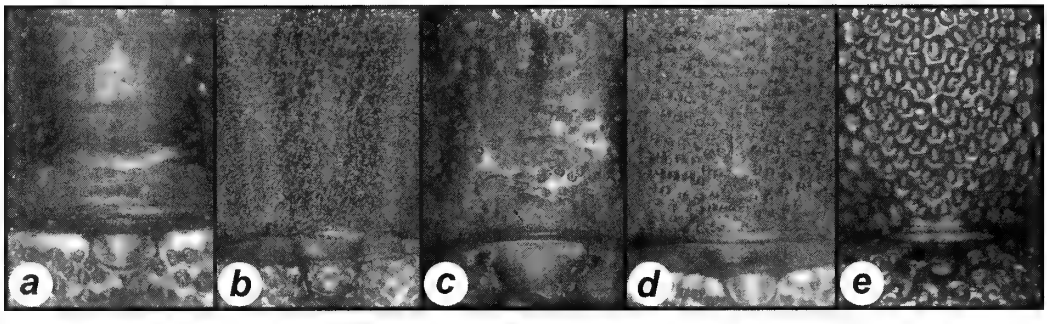

Fig. 44. Character 14: pronotum, dorsal surface. a, microsculptured with sparse, shallow punctation (*Plectromerus thomasi*, new species). b, granulose (*Curius dentatus*). c, punctate with glabrous areas (*Plectromerus acunai*). d, microsculptured with punctures interspersed (*Plectromerus turnbowi*, new species). e, heavily, evenly punctate (*Coscinedes gracilis*).

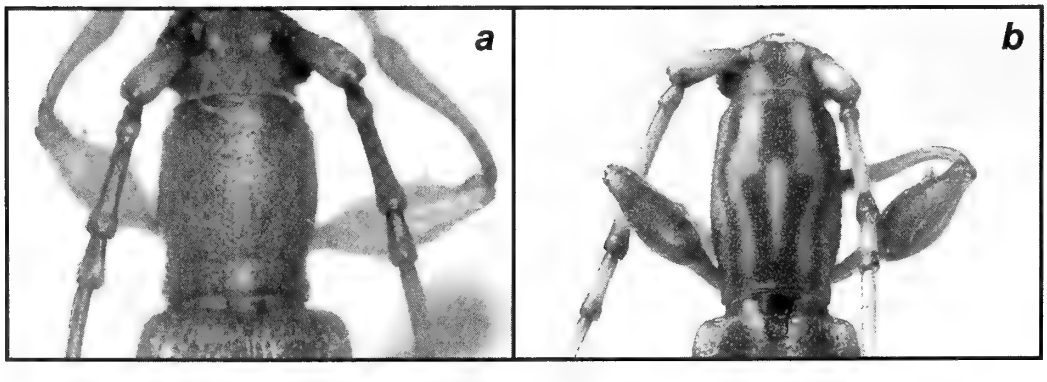

Fig. 45. Character 16: pronotum ornamented with distinct "inverted Y" marking. a, absent (*Plectromerus turnbowi*, new species). b, present (*Curius chemsaki*).

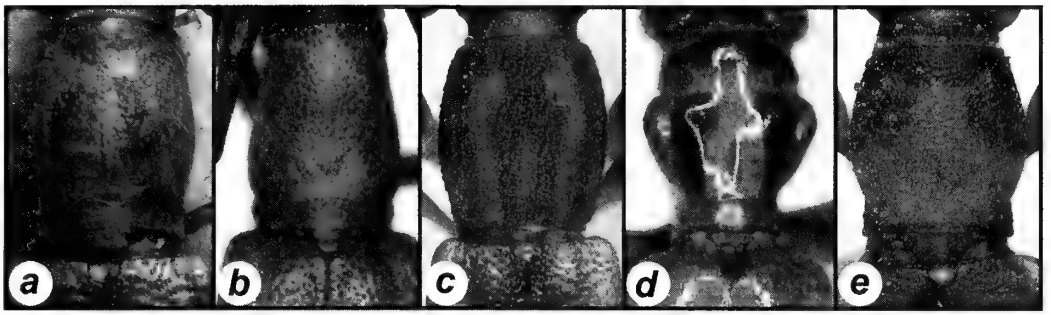

Fig. 46. Character 17: pronotal sides. a, nearly parallel, slightly inflated (widest) at middle (*Plectromerus fasciatus*). b, widest area distinctly behind middle (*Hypexilis pallida*). c, evenly rounded, nearly cylindrical (*Curius dentatus*). d, sides tuberculate or protuberate (*Obrium maculatum*). e, globose, sides broadly rounded (*Plectromerus femoratus*).

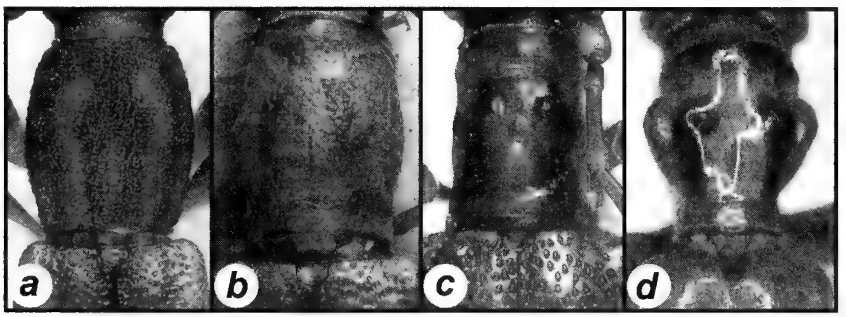

Fig. 47. Character 18: pronotal constriction. a, somewhat evenly constricted at apex and base (*Curius dentatus*). b, slightly more constricted at base than apex (*Plectromerus fasciatus*). c, slightly more constricted at apex than base (*Plectromerus thomasi*, new species). d, strongly constricted at base (*Obrium maculatum*).

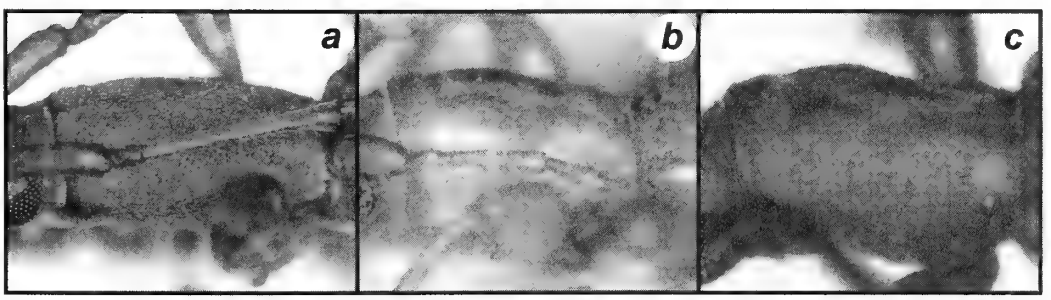

Fig. 48. Character 19: pronotal disk. a, without calli (*Curius panamensis*). b, with one slightly raised, median callus at about the center, with two slightly raised, submedial calli slightly anterior to center, and two slightly raised, submedial calli slightly posterior to center (*Plectromerus serratus*). c, with one moderately raised, median callus at about the center, with two moderately raised, submedial calli slightly anterior to center, and two moderately raised, submedial calli slightly posterior to center (*Plectromerus josephi*, new species).

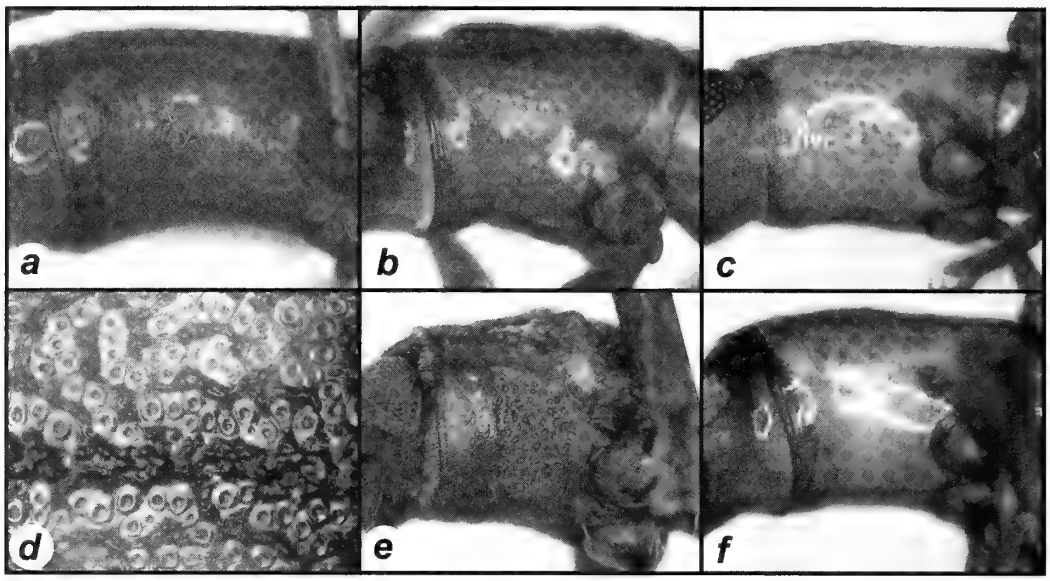

Fig. 49. Character 20: males with sexually dimorphic prothoracic punctation. a, absent (*Plectromerus exis*). b, present (*Plectromerus dezayasi*, new species). c, present (*Plectromerus pinicola*). d, present (*Curius punctatus*). e, present (*Parommidion extricatum*). f, present (*Plectromerus pumilus*).

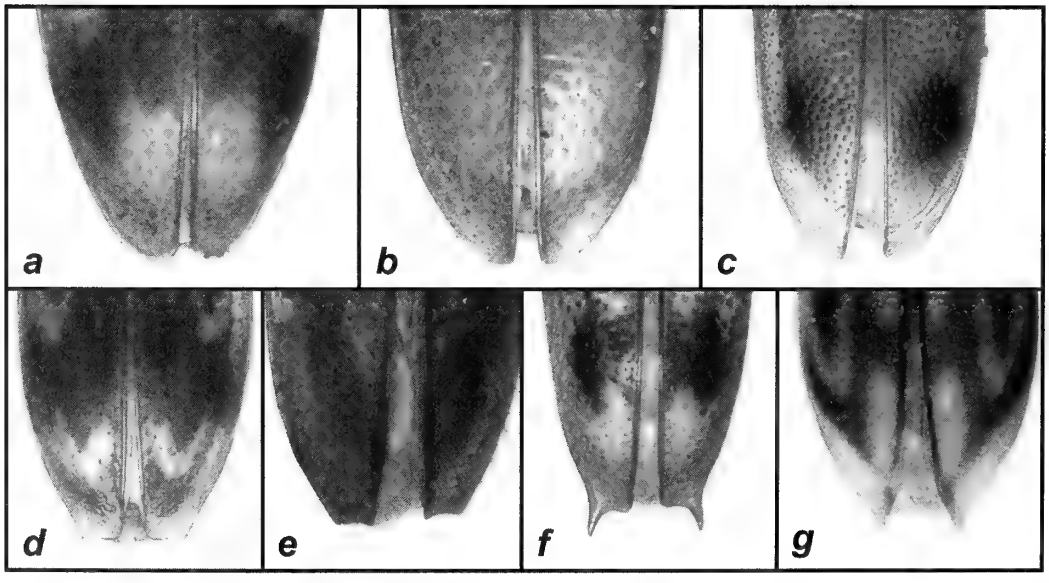

Fig. 50. Character 24: elytral apices. a, broadly rounded (*Plectromerus dezayasi*, new species). b, narrowly rounded (slightly constricted or pointed) (*Plectromerus serratus*). c, subtruncate / rounded (*Plectromerus turnbowi*, new species). d, strongly truncate, straight across (*Plectromerus dentipes*). e, strongly truncate, concave across (*Parommidion extricatum*). f, outer margins with large, acute spine (*Plectromerus bidentatus*). g, inner margins forming a blunt, curved point (*Curius chemsaki*).

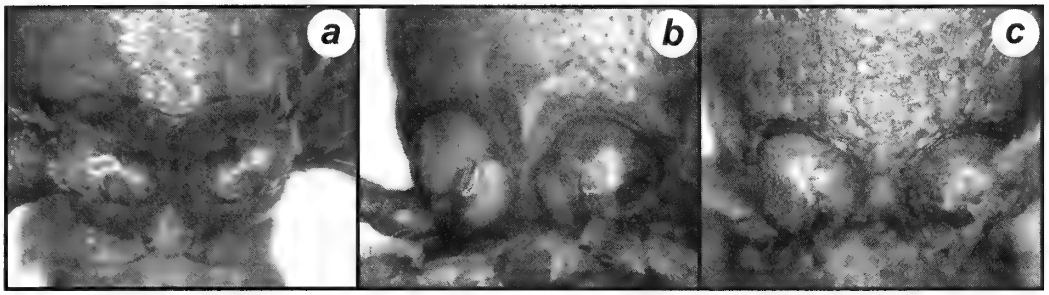

Fig. 51. Character 26: prosternal process between procoxae. a, thin, about 0.1 times width of procoxal cavity (*Obrium maculatum*). b, medium, about 0.2 times width of procoxal cavity (*Plectromerus fasciatus*). c, wide, about 0.3 times width of procoxal cavity (*Curius punctatus*).

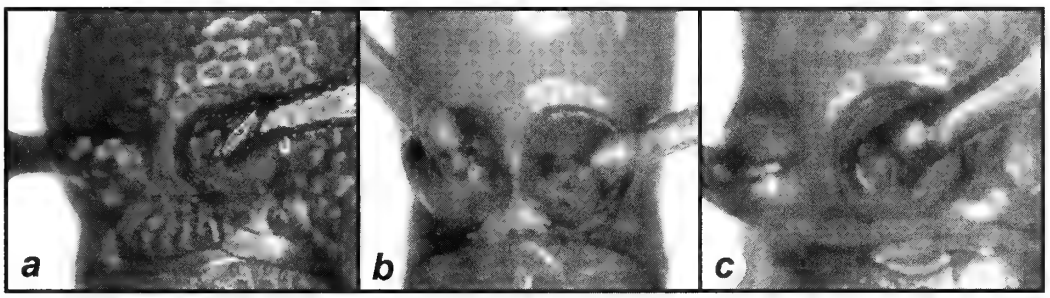

Fig. 52. Character 27: procoxal cavities. a, closed (*Coscinedes gracilis*). b, narrowly open, nearly closed (*Plectromerus morrisi* new species). c, widely open (*Plectromerus turnbowi*, new species).

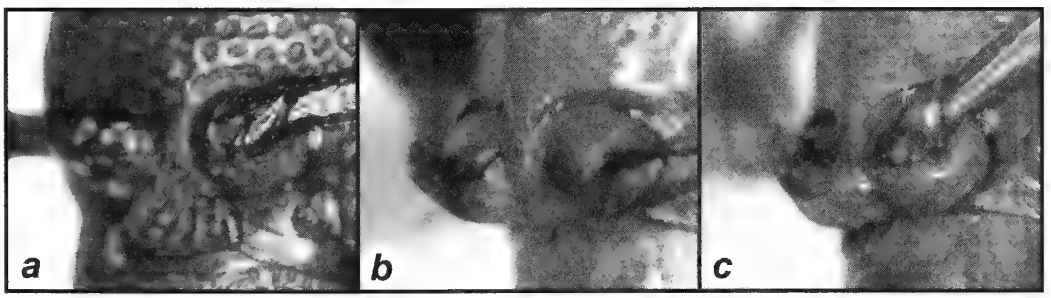

Fig. 53. Character 28: prosternal process between procoxae. a, nearly flat, not declivous (*Coscinedes gracilis*). b, gradually declivous (*Plectromerus dentipes*). c, abruptly declivous (*Plectromerus bidentatus*).

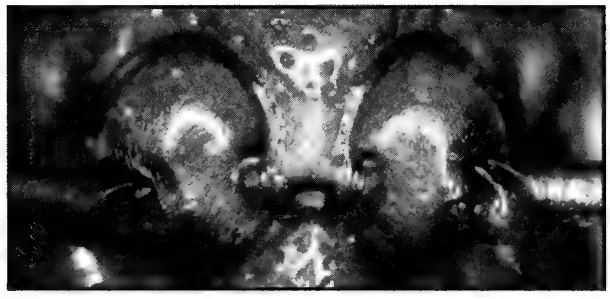

Fig. 54. Character 29: mesosternum with broad mesocoxal process with lateral extensions into mesocoxae (*Plectromerus turnbowi*, new species).

Fig. 55. Character 30: metafemoral armature. a, no tooth present (*Parommidion extricatum*). b, with one sharp tooth (*Plectromerus dentipes*). c, with two sharp teeth (*Plectromerus bidentatus*).

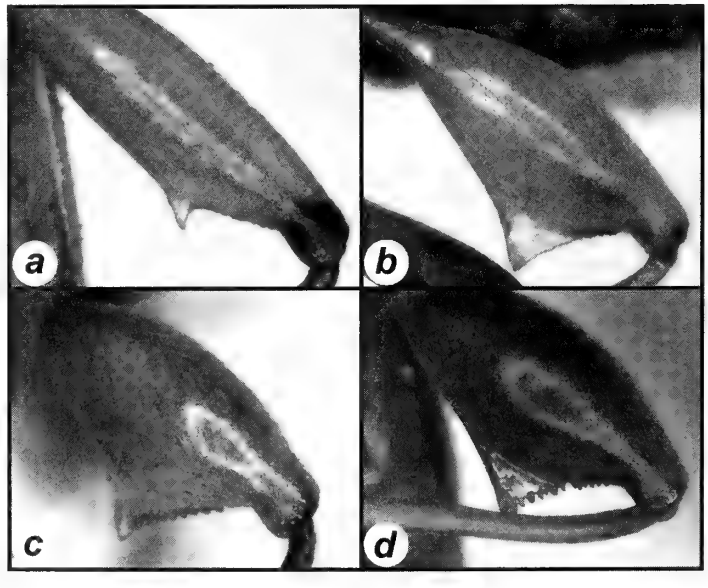

Fig. 56. Character 31: if metafemora armed with one sharp tooth, then tooth with serrations on posterior margin. a, absent (no peaks, edge is smooth) (*Curius punctatus*). b, feebly serrate (small, indistinct peaks) (*Plectromerus michelii*, new species). c, moderately serrate (moderate sized) (*Plectromerus distinctus*). d, strongly serrate (deep, distinct peaks) (*Plectromerus dezayasi*, new species).

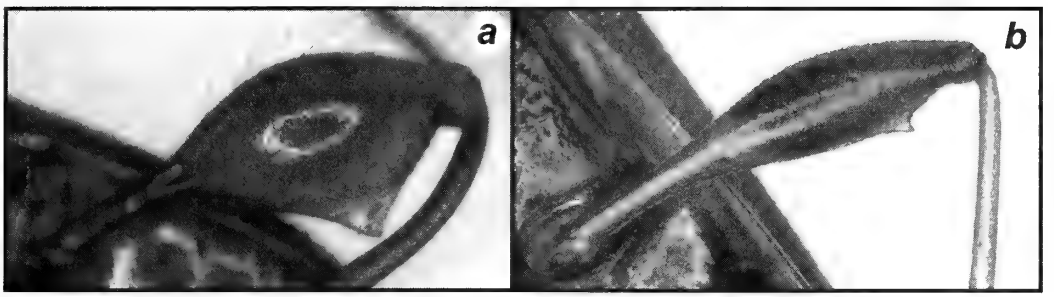

Fig. 57. Characters 32 and 33: metafemora. a, metafemora with long, erect setae (*Plectromerus wappesi*). b, metafemora: distal portion distinctly darker than basal (*Curius dentatus*).

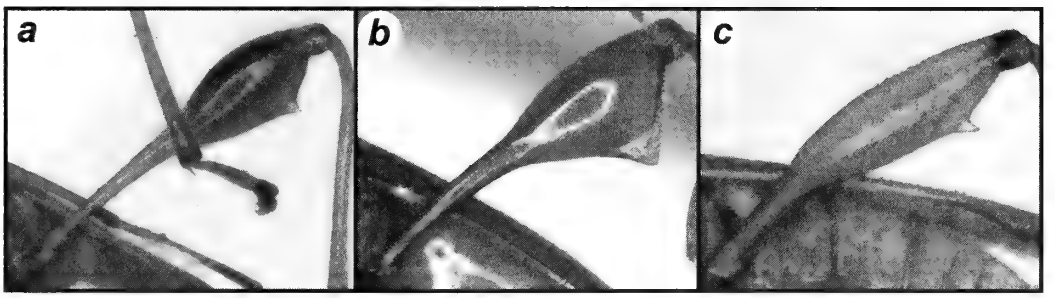

Fig. 58. Character 34: basal (non-clavate) portion of metafemora compared to metafemoral club. a, distinctly longer (*Plectromerus exis*). b, about equal (*Plectromerus serratus*). c, distinctly shorter (*Plectromerus femoratus*).

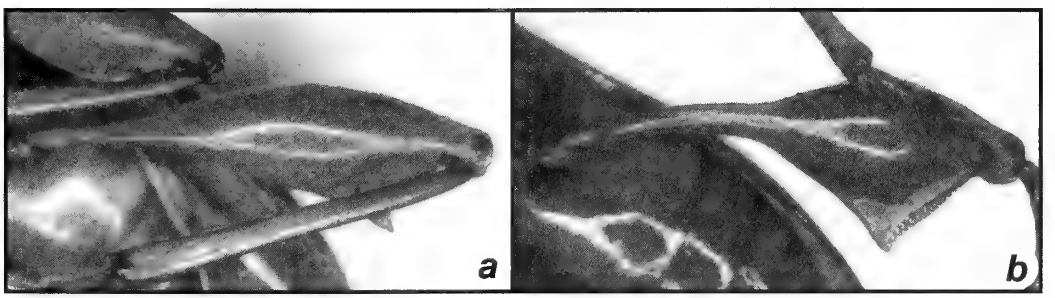

Fig. 59. Character 35: metafemoral shape. a, gradually enlarged from base (*Plectromerus fasciatus*). b, pedunculate-clavate (*Plectromerus morrisi*, new species).

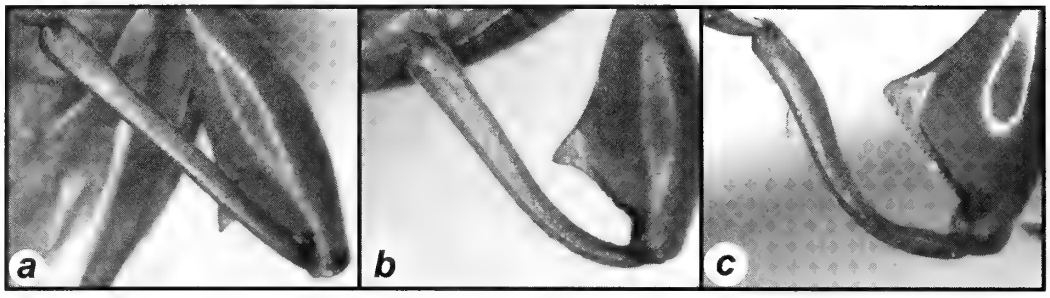

Fig. 60. Character 36: metatibial shape. a, nearly straight (*Plectromerus pinicola*). b, moderately sinuate (*Plectromerus josephi*, new species). c, strongly sinuate (*Plectromerus morrisi*, new species).

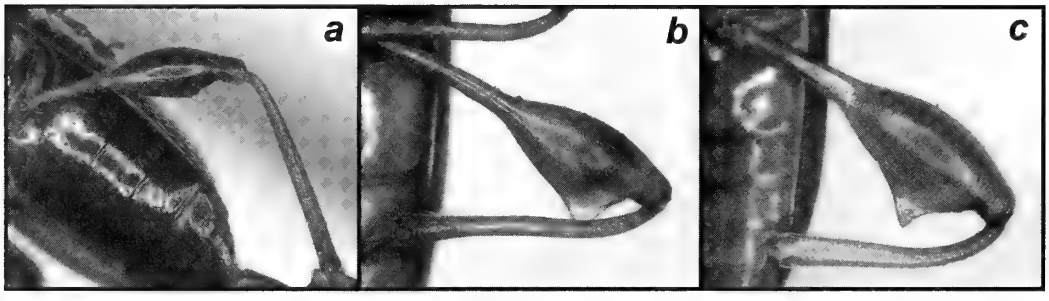

Fig. 61. Character 37: length of metatibia in relation to metafemur. a, about equal length (*Plectromerus dominicanus*, b, slightly shorter, about 0.7 times length (*Plectromerus thomasi*, new species). c, distinctly shorter, about 0.5 times length (*Plectromerus josephi*, new species).

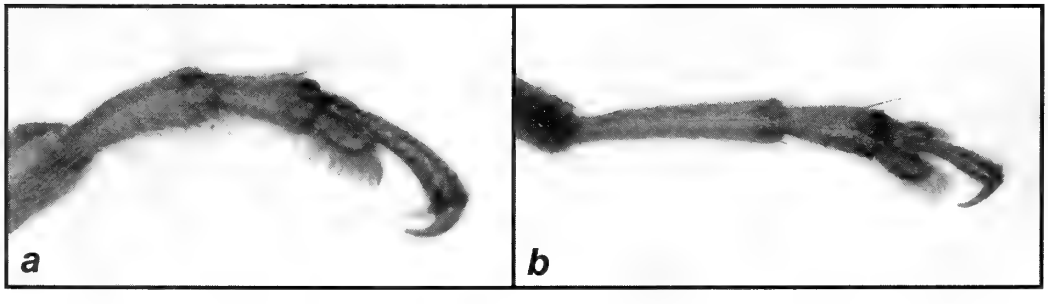

Fig. 62. Character 38: metalegs with first tarsomere at least twice as long as second. a, absent (*Plectromerus dentatus*). b, present (*Curius panamensis*).

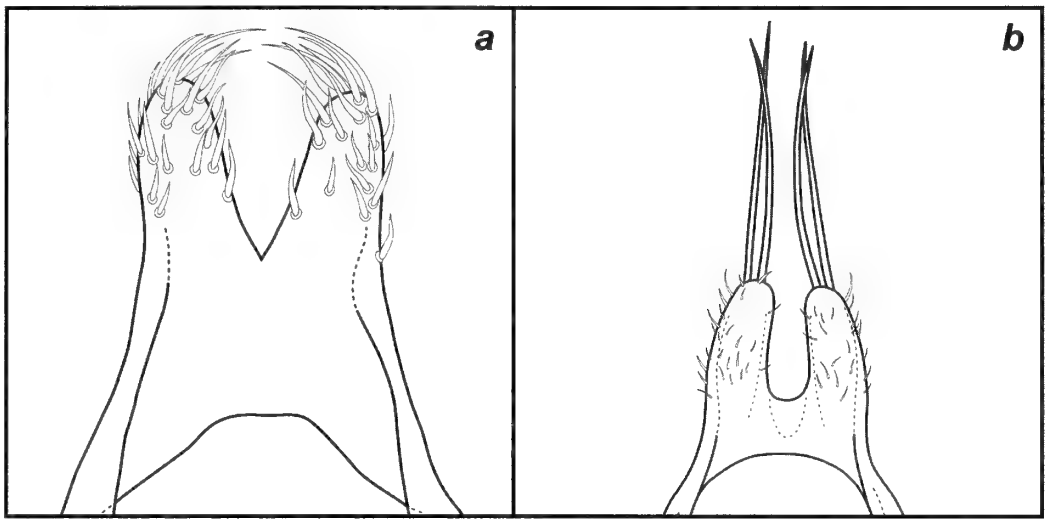

Fig. 63. Character 39: male genitalia. a, parameres with several short setae projecting from tips of lateral lobes (*Curius dentatus*). b, parameres with two long setae projecting from tips of lateral lobes (*Plectromerus dentatus*).

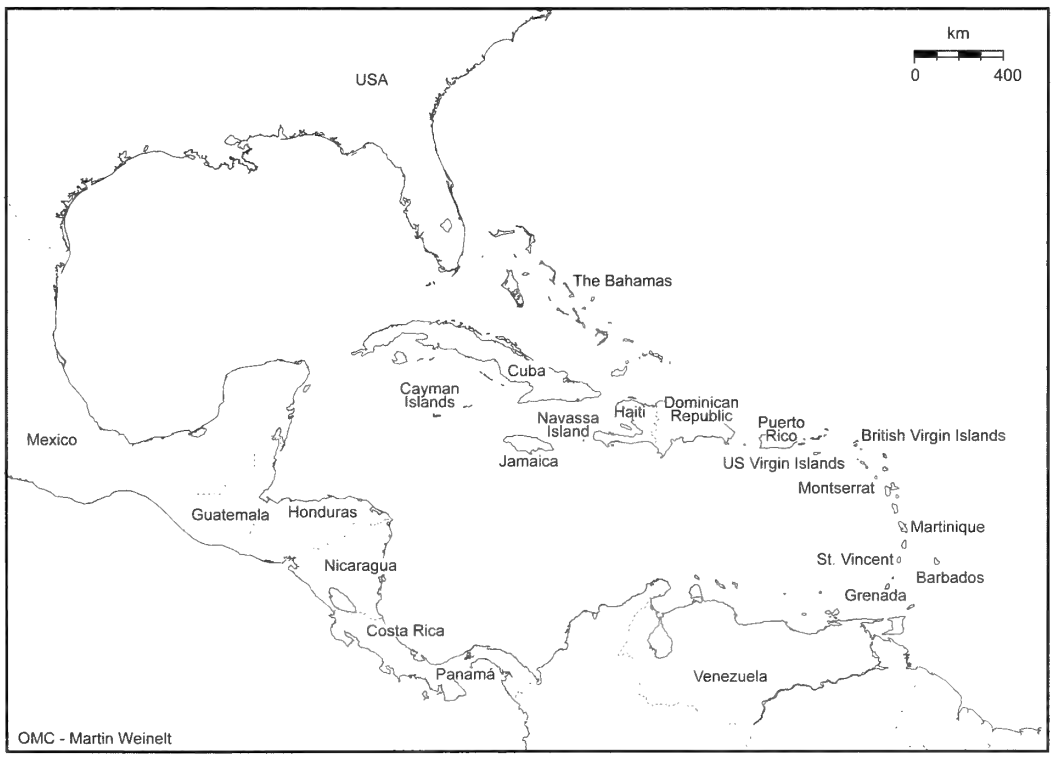

Fig. 64. Distribution of *Curius* and *Plectromerus*. Named countries represent those from which collection records exist.

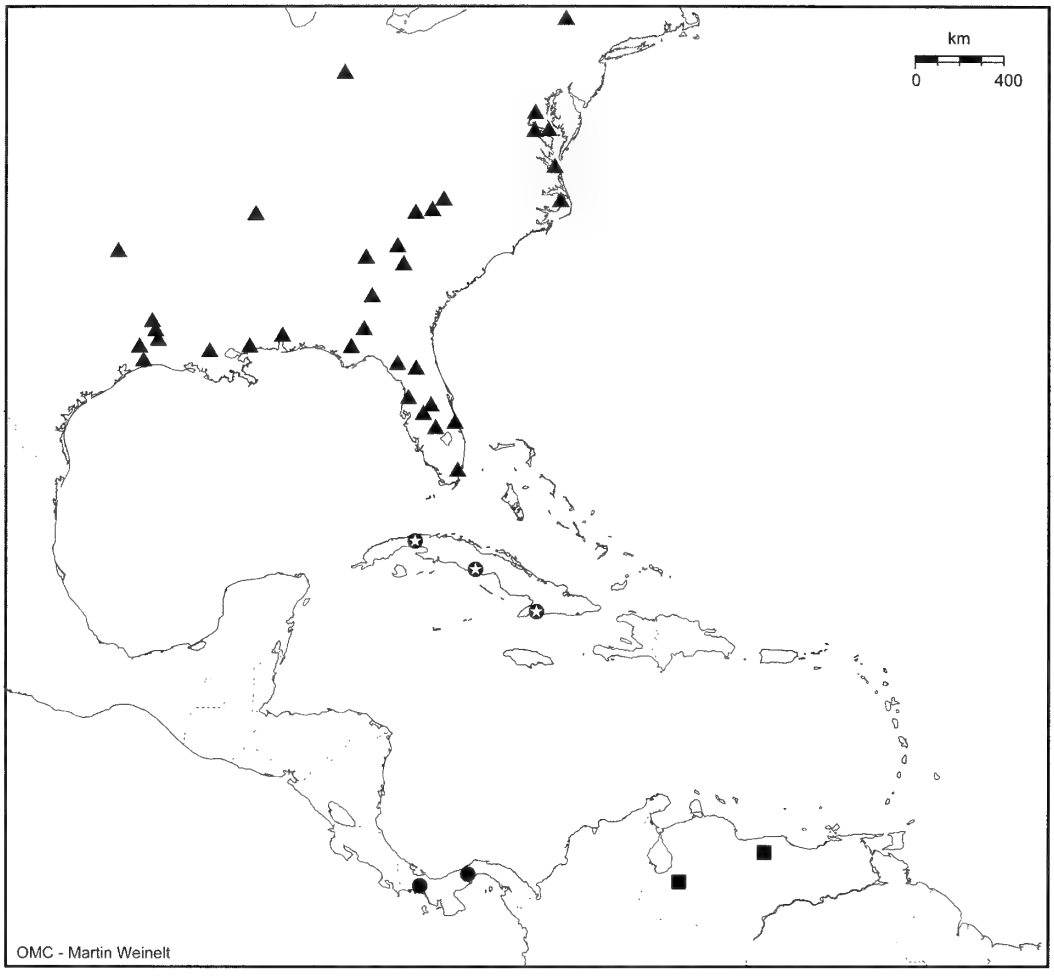

Fig. 65. *Curius* species, distributions. ■, *C. chemsaki*. ▲, *C. dentatus*. ●, *C. panamensis*. ✪, *C. punctatus*.

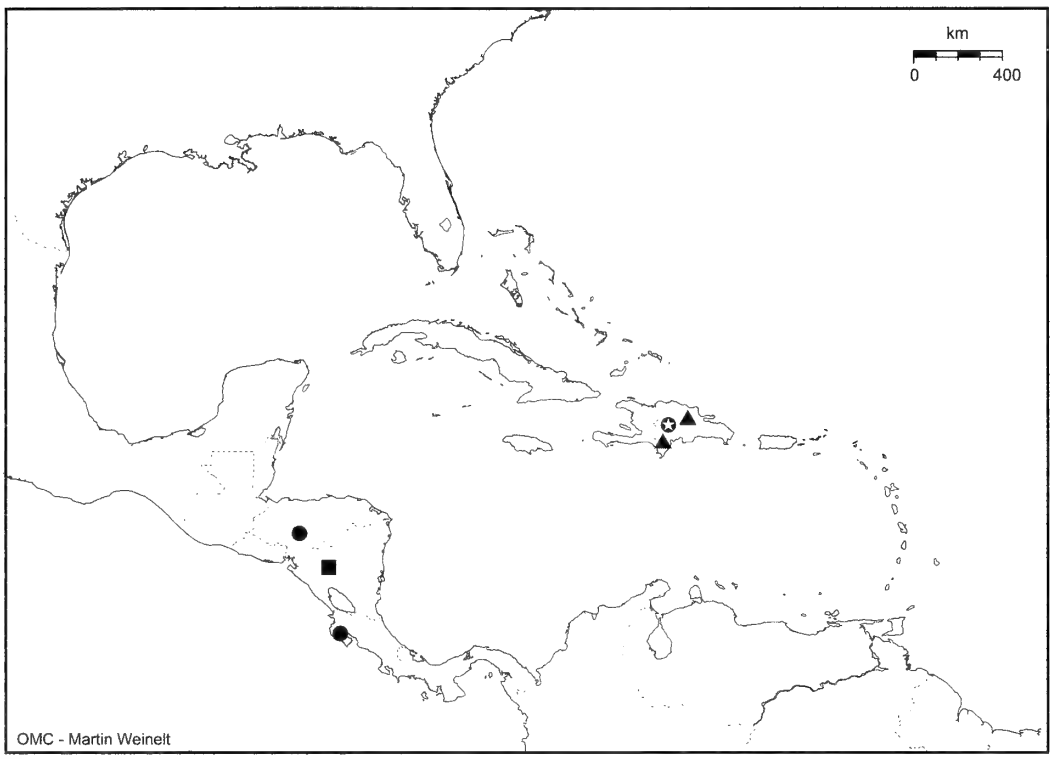

Fig. 66. *Plectromerus* species, distributions. ■, *P. dezayasi*, new species. ▲, *P. lingafelteri*. ●, *P. hovorei*, new species. ✪, *P. grimaldii* †.

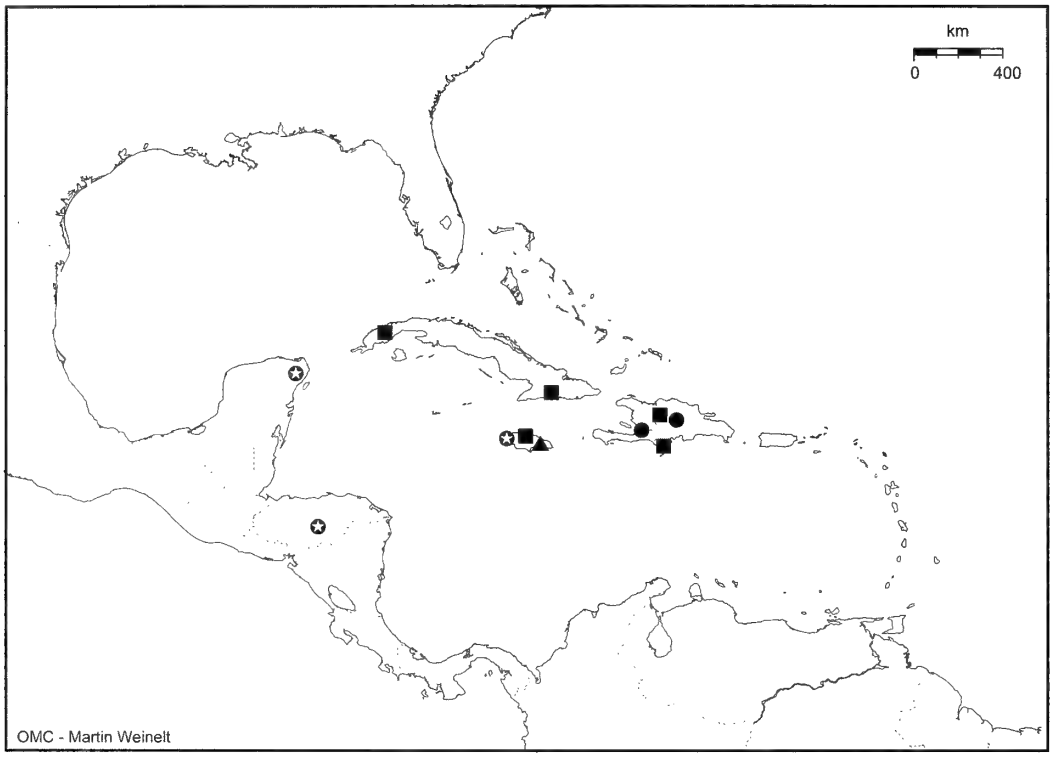

Fig. 67. *Plectromerus* species, distributions. ■, *P. exis.* ▲, *P. femoratus.* ●, *P. serratus.* ✪, *P. wappesi.*

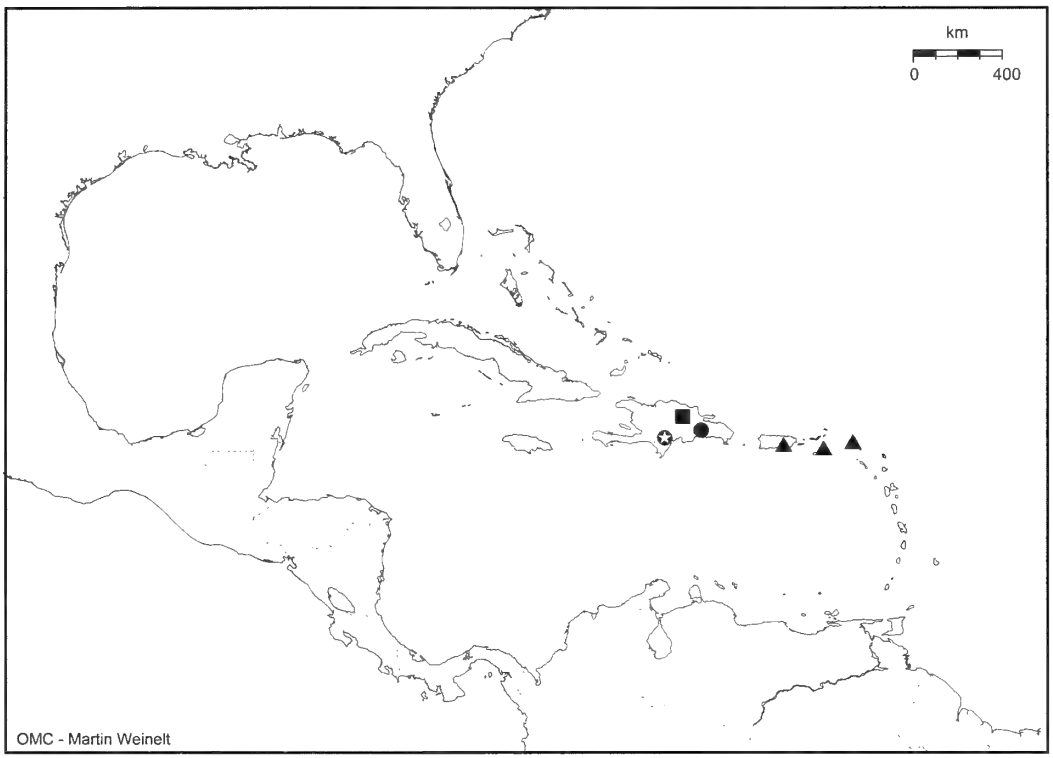

Fig. 68. *Plectromerus* species, distributions. ■, *P. bidentatus*. ▲, *P. ramosi*. ●, *P. tertiarius* †. ✪, *P. turnbowi*, new species.

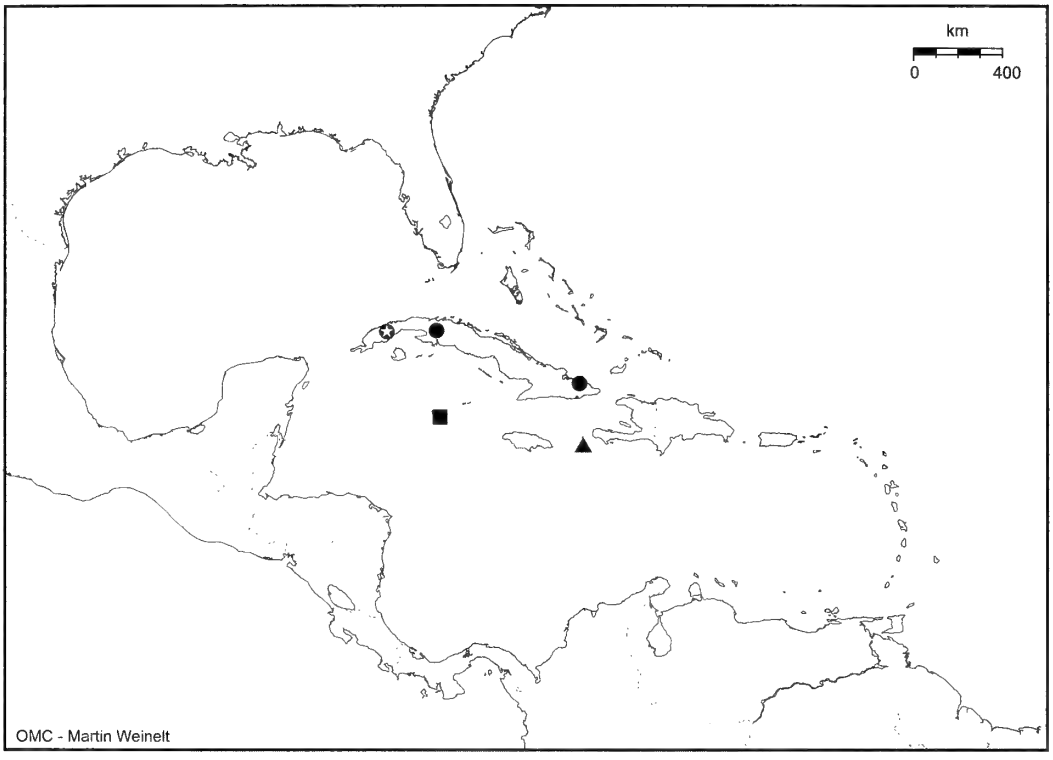

Fig. 69. *Plectromerus* species, distributions. ■, *P. michelii*, new species. ▲, *P. navassae*. ●, *P. ornatus*. ✪, *P. pinicola*.

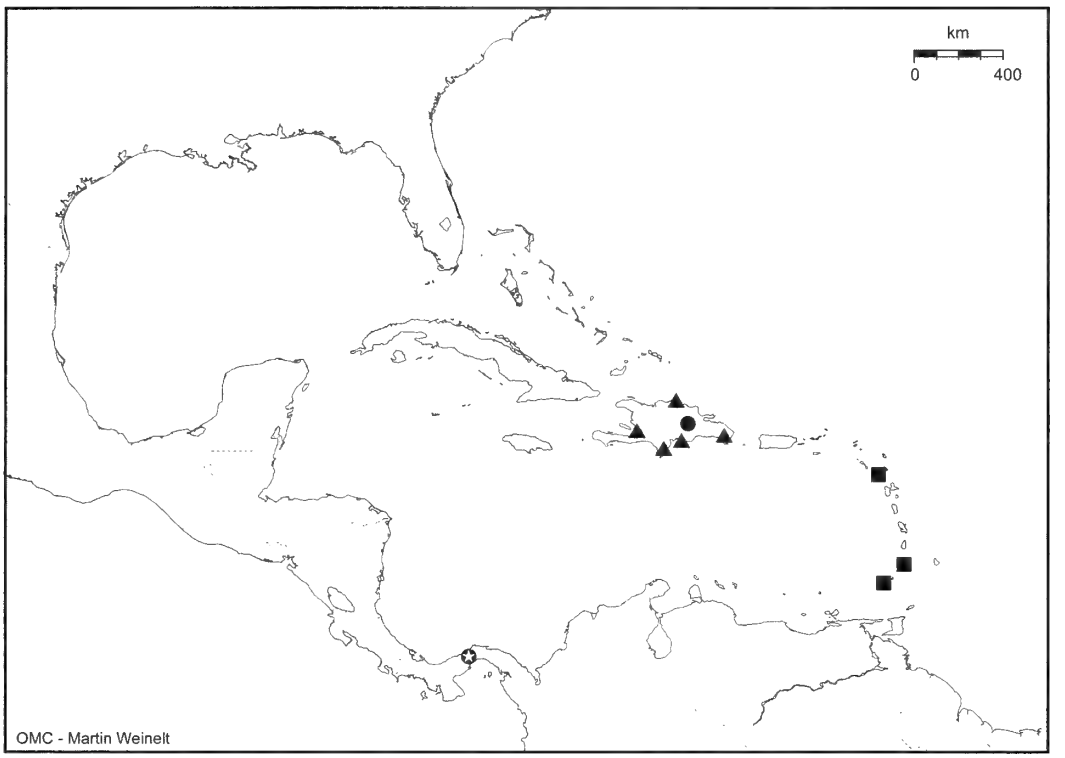

Fig. 70. *Plectromerus* species, distributions. ■, *P. fasciatus.* ▲, *P. distinctus.* ●, *P. dominicanus.* ✪, *P. morrisi,* new species.

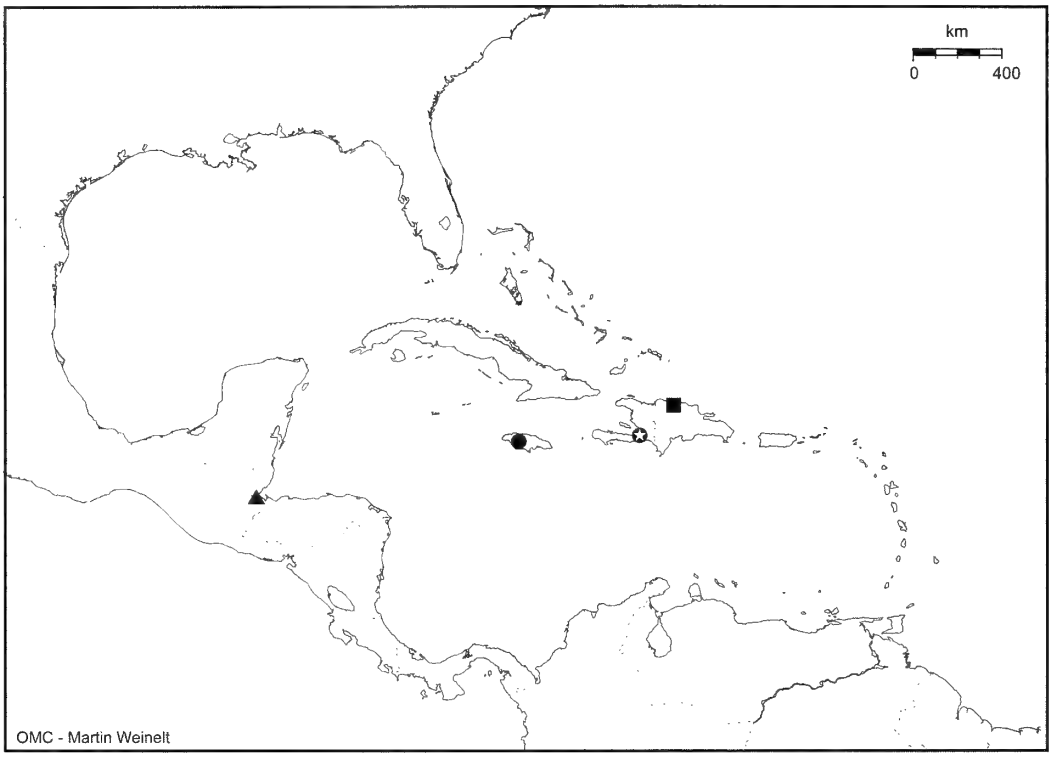

Fig. 71. *Plectromerus* species, distributions. ■, *P. josephi*, new species. ▲, *P. giesberti*, new species. ●, *P. unidentatus*. ✪, *P. thomasi*, new species.

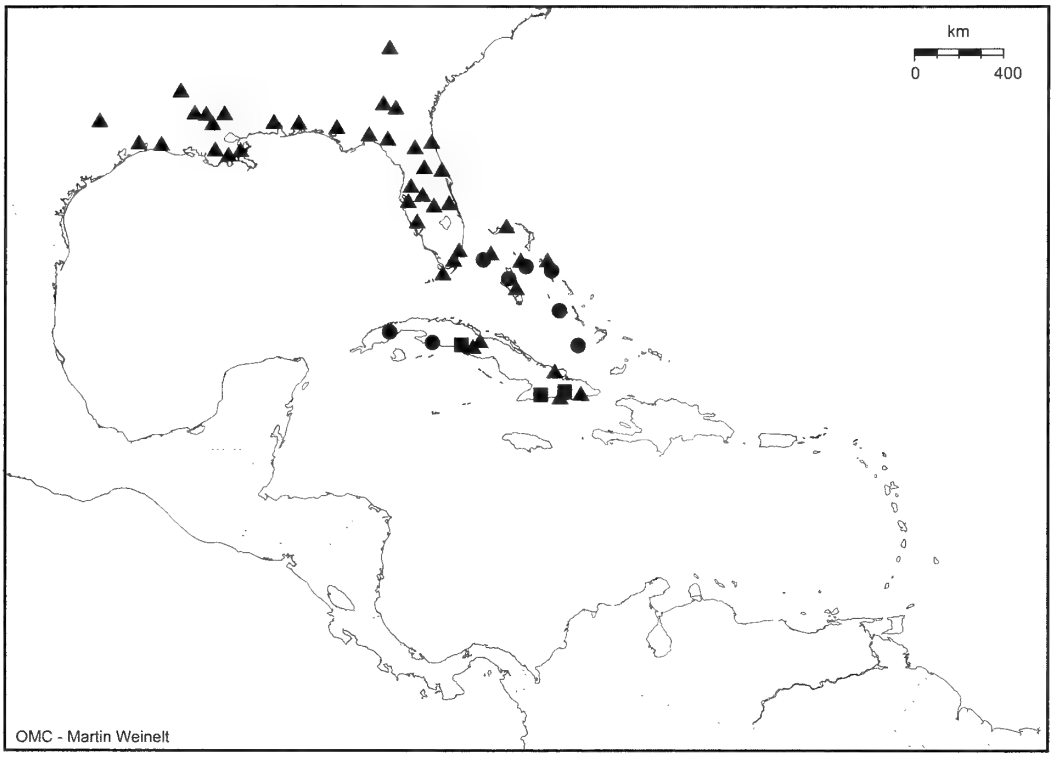

Fig. 72. *Plectromerus* species, distributions. ■, *P. acunai.* ▲, *P. dentipes.* ●, *P. pumilus.*

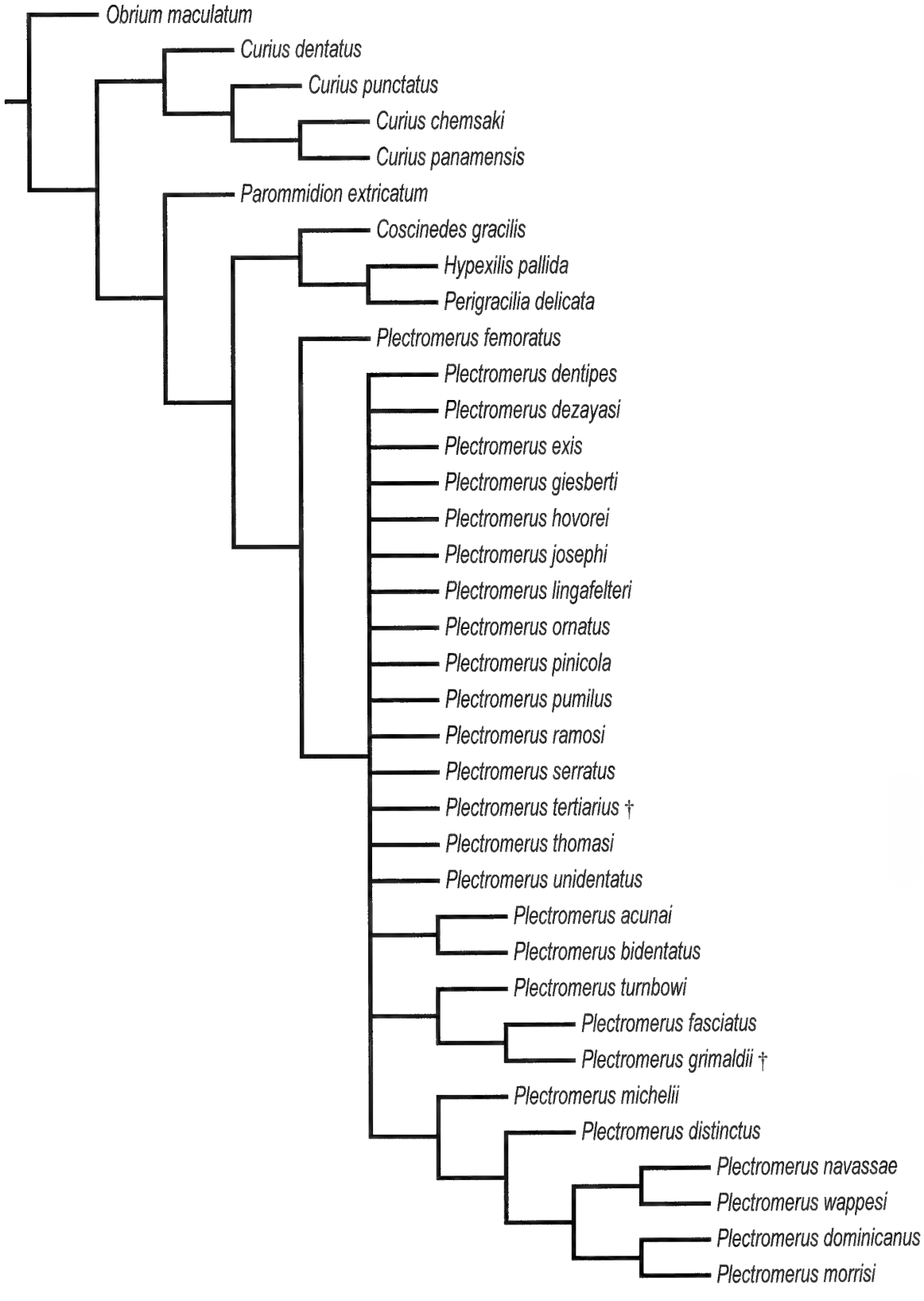

Fig. 73. Strict consensus of 19 most parsimonious trees (L = 180 steps, CI = 40, RI = 61) resulting from cladistic analysis of *Curius* and *Plectromerus* including the fossil *Plectromerus tertiarius*.

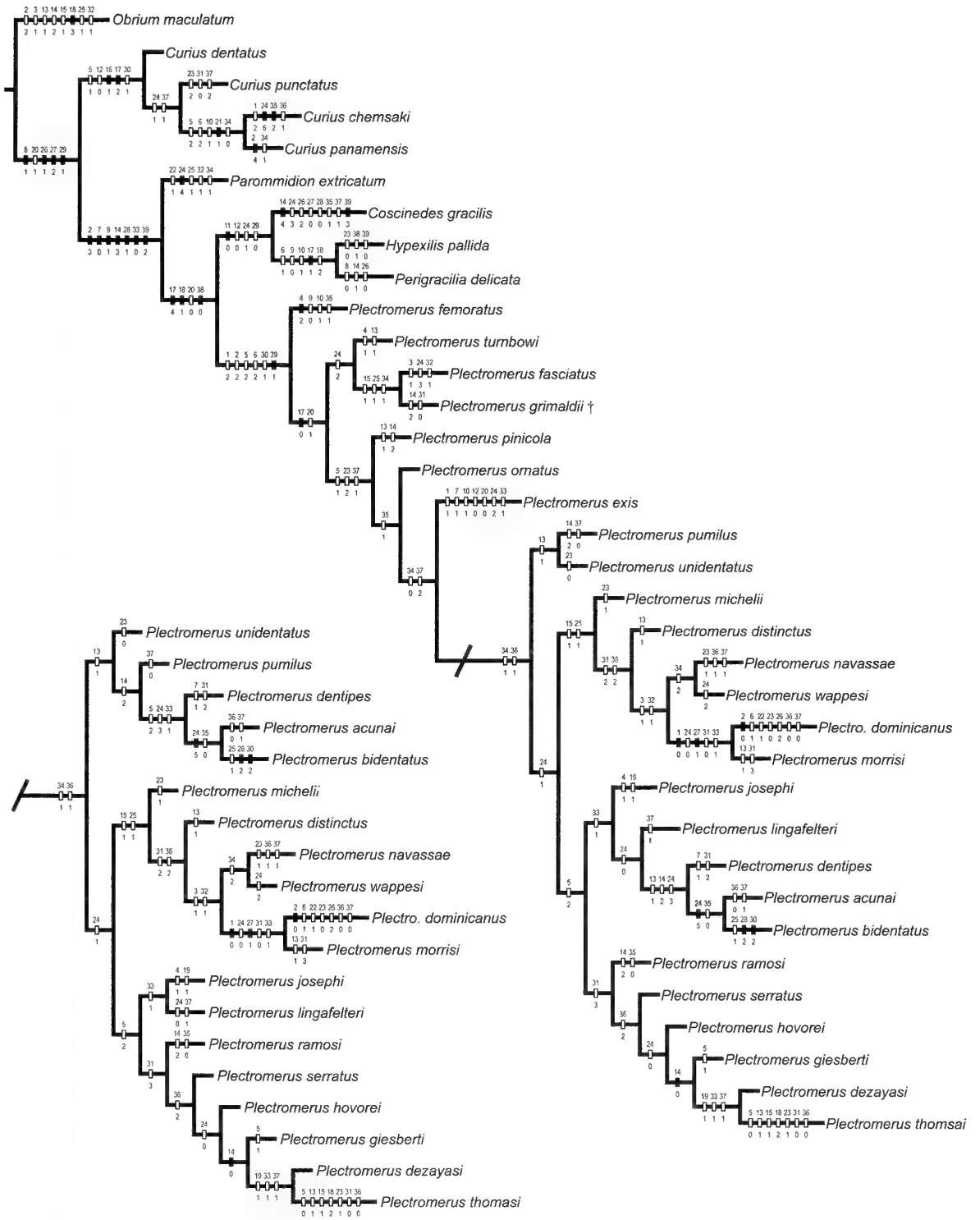

Fig. 74. Two most parsimonious trees (L = 180 steps, CI = 40, RI = 61) resulting from cladistic analysis of *Curius* and *Plectromerus* excluding the fossil *Plectromerus tertiarius*, one arbitrarily chosen cladogram showing all taxa in analysis, with characters mapped using ACCTRAN (fast) optimization. Oblique line indicates clade in which there are multiple alternative equally parsimonious arrangements of taxa. Black hash marks indicate unambiguous changes, white hash marks indicate homoplasious changes or reversals. Numbers above hash marks are character numbers, those below hash marks are character states.

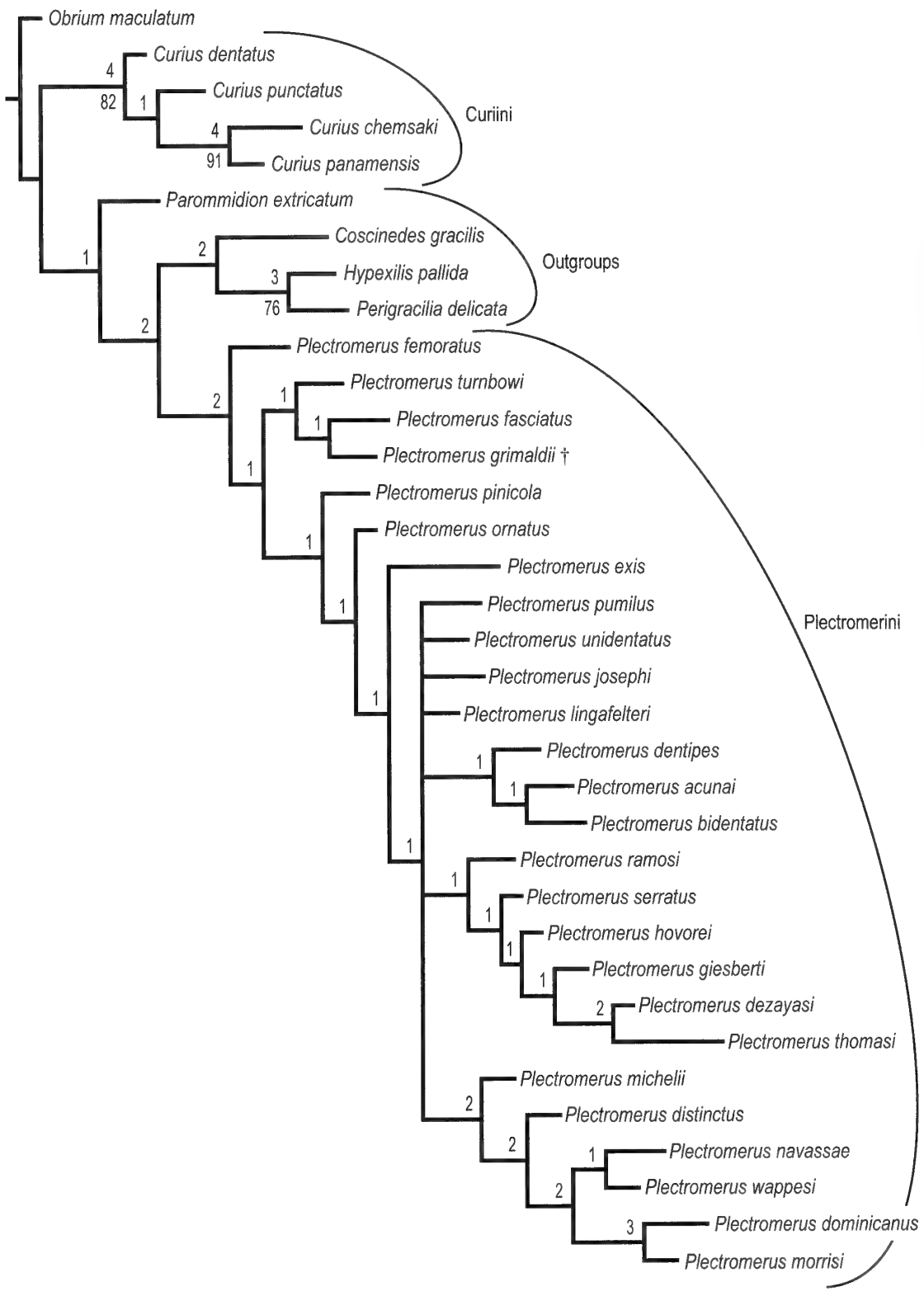

Fig. 75. Strict consensus of two most parsimonious trees (L = 180 steps, CI = 40, RI = 61) resulting from cladistic analysis of *Curius* and *Plectromerus* excluding the fossil *Plectromerus tertiarius*. Bremer support values are reported above the branches, bootstrap support values (> 70%) are reported below the branches.

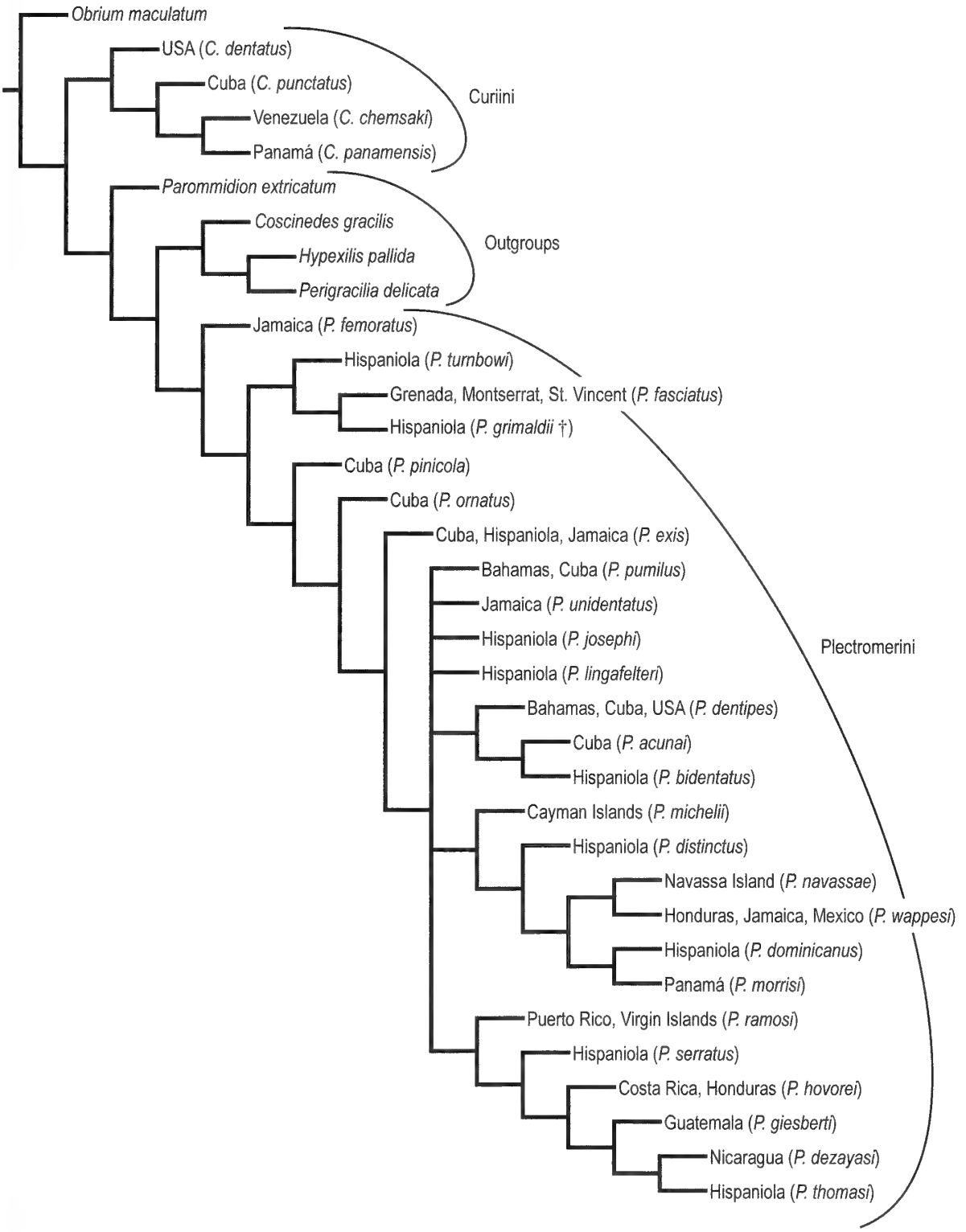

Fig. 76. Area cladogram based on the strict consensus tree of two most parsimonious trees (L = 180 steps, CI = 40, RI = 61) resulting from cladistic analysis of *Curius* and *Plectromerus* excluding the fossil *Plectromerus tertiarius*.

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